steer davies gleave

2040 Regional Transportation Plan - Transit

Final
July 2015

City of Colorado Springs
Transit Services Division

Our ref: 22665301
Client ref: C007329

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Prepared by:

Steer Davies Gleave
1900 Wazee Street, Suite 250
Denver, CO 80202

+1 (303) 416 7226
na.steerdaviesgleave.com

Prepared for:

City of Colorado Springs
Transit Services Division
1015 Transit Drive
Colorado Springs, CO 80903

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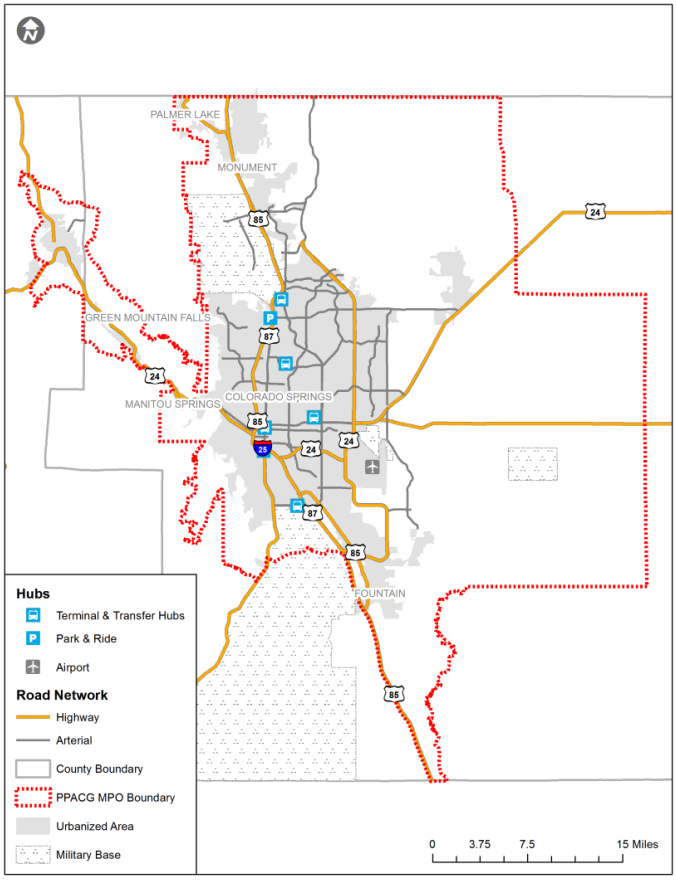
Executive Summary

In the spring of 2014, the City of Colorado Springs Transit Services Division (Transit) and the Pikes Peak Area Council of Governments (PPACG) partnered to examine the public transit services provided throughout the PPACG area and create a Transit Plan and a Specialized Transportation Coordination Plan as elements to be included in the PPACG *2040 Moving Forward Regional Transportation Plan* (2040 RTP). These plans provide near-, mid-, and long-term visions for potential public transportation growth and improvements in the PPACG area.

This Transit Plan is based on the levels and structure of public transportation as it existed at the start of the study and aims to anticipate the needs for public transportation through 2040. This executive summary presents a high-level overview of the development and key recommendations of the plan.

Plan Study Area



Context

The City of Colorado Springs is the designated recipient of federal transit funds for the Colorado Springs Urbanized Area (UZA). This study examines and projects the needs of the entire UZA, including:

- The City of Colorado Springs

- The City of Manitou Springs
- Portions of the Security-Widefield
- Portions of El Paso County
- Portions of Teller County

The Mountain Metro fixed-route service, the Metro Mobility Americans with Disabilities Act (ADA) required complementary paratransit service, and other coordinated Human Services Providers (HSP) specialized transportation services are all included in the plan.

Project Guidance

Multiple organizations, agencies, and local governments provided critical input to the plan as project partners and active members of the project's Steering Committee. The overarching purpose of the Steering Committee was to guide the plan development and provide initial feedback on potential transit and specialized transportation options and improvements. The Steering Committee tracked the plan's progress and provided input from the perspective of the jurisdiction or organization each member represented.

Steering Committee

Steering Committee Members	
Amblicab	Mobility Coordination Committee (MCC)
Colorado Springs Citizens Transportation Advisory Board (CTAB)	City of Colorado Springs Transit Services Division
City of Fountain	Peterson Air Force Base (AFB)
Colorado Springs City Council	PPACG
Colorado Springs Cycling Club	Pikes Peak United Way
Colorado Springs Housing Development Division	PPACG Community Advisory Committee
Community Transit Coalition	Regional Business Alliance
El Paso County Commission	School District 11
El Paso County Dept. of Human Services	Silver Key Senior Services
El Paso County Public Health	Springs Rescue Mission
El Pomar Foundation	The Independence Center
Fort Carson	Transit Passenger Advisory Committee
Fort Carson Retiree Activities Council	University of Colorado at Colorado Springs (UCCS)
LiveWell	

Guiding Principles

The goals and objectives developed for the 2040 Regional Transportation Plan were adapted by the Steering Committee for use as the guiding principles of both the Transit Plan and Specialized Transportation Coordination Plan.

The Transit and Specialized Transportation Plans are two elements (of many) included in the 2040 RTP.

The Regional Transportation Plan addresses all modes of transportation, and is updated at regular intervals to reflect the changing priorities, resources, and needs for the PPACG area.

Goals

Develop a Transit Plan and Specialized Transportation Coordination Plan which:

- Serves as the basis for future planning and grant approvals
- Presents 5-, 10-, and 20-year scenarios
- Creates strong stakeholder input and buy-in
- Is aligned with state and federal plans
- Builds on the goals and performance measures set forth in the 2040 RTP

Objectives

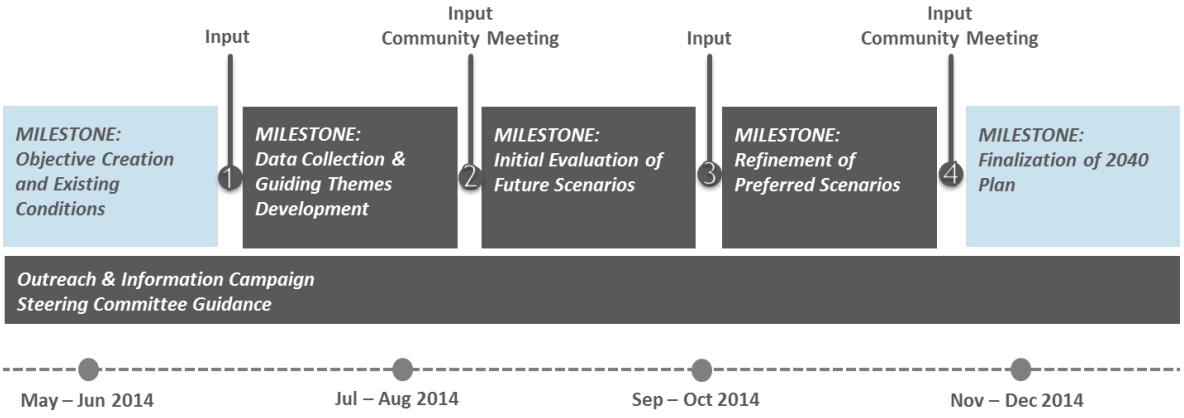
The Transit Plan objectives include:

- Provide transportation choice
- Improve access to jobs, schools, medical facilities, and other services, especially for people without other transportation options
- Create efficiencies and improve cost effectiveness of services
- Provide congestion relief
- Promote environmental stewardship
- Promote economic vitality
- Promote the coordination of public, private, and non-profit transportation services

Process and Stakeholder Input

The project process started with the existing transit scenario and presented broad transit service options to residents, the business community, major employers, transit users, potential transit users, and others for input. Cycles of gathering and analyzing input and refining the options were used to develop the final recommendations.

Process



The process included two significant levels of examination:

- Identification and community review of the 'guiding themes'
- Examination of transit scenarios as potential recommendations

Guiding themes were identified in the initial phases of the plan development and potential transit improvements were grouped under those themes for further examination. The four guiding themes used were:

- Theme 1: Focus on the existing service area
- Theme 2: Improve service hours and frequencies
- Theme 3: Improve connectivity, transfers, and hubs
- Theme 4: New service and new service models

The table below provides further details on the examination and the associated stakeholder input opportunities.

Examination and Outreach

Examination	Definition	Outreach Activities Completed
Guiding themes	The initial identification and analysis of the full range of potential transit ideas. The potential ideas were organized into broader 'themes' for discussion and input with stakeholders.	• Steering committee meetings #1 and #2 • Stakeholder questionnaire #1 • Community meeting #1 completed • Stakeholder focus groups and interviews
Examination of scenarios	This step included identifying specific transit improvements based on the broader themes for transit. These transit improvements were ultimately refined to form the plan's recommendations in 5-, 10-, and 20-year timeframes.	• Steering committee meetings #3 and #4 • Stakeholder questionnaire #2 • Community meeting #2 completed

Examination

The examination of transit scenarios included considering each potential improvement against various criteria. Applying the criteria to each of the potential transit improvements helped to identify the strong performers for ultimate inclusion as recommendations in the plan. The following table presents each category of criteria and a definition of each.

Criteria Categories

Criteria Category	Definition
Fiscal	Examines potential costs, funding, phasing
Mobility	Considers the achievement of multimodal connectivity across the PPACG area
Community	Presents the potential benefits and/or impacts to local stakeholders
Deliverability	Considers the technical opportunities and constraints for developing the transit improvements

Examination of Transit Scenarios

Early in the project's inception, the project team engaged with key stakeholders to understand the current strengths, weaknesses, challenges, and opportunities associated with transit service within the study area. The results of these brainstorming sessions became the basis for identifying the initial range of transit needs (potential physical improvements and policies). Four themes

ultimately surfaced and were used to organize the initial set of transit improvements for examination.

Following the initial review of the transit themes, the themes were further refined to create more-detailed transit scenarios (packages of complementary improvements). These scenarios were examined in comparison to the criteria to determine the top performers

The strongest improvements were advanced for future consideration.

The transit scenarios also incorporated stakeholder input through review by the Steering Committee, online questionnaires, and community meetings. Each of the transit scenarios were further refined based on this input, forming the ultimate recommendations of the plan.

Recommendations

The recommendations were selected to meet the goals of this plan. The recommendations focus on expanding the current transit market to offer greater transportation choice for passengers, while at the same time being effective and efficient with the scarce financial resources available. The plan proposes incremental increases in frequency, span, and quality of services, which will provide improved access to jobs, goods, and services to both choice and transit-dependent riders, relieve traffic congestion, improve environmental conditions, and help to improve the coordination and delivery of other transportation services offered.

Brief descriptions of the recommendations are included in the following sections.

- Focus on the Existing Service Area
- Develop Additional Service Planning Standards and Policies
- Consider New Services and Models
- Consider High-Capacity Transit
- Consider New Governance

Focus on the Existing Service Area

It is recommended to focus first on improving services within the existing service area and encouraging more transit-oriented development at strategic activity centers and corridors. A coordinated and integrated approach in achieving these two priorities will help build ridership and, over time, develop a culture of transit use in a cost-effective manner.

- Improve Service Frequency and Span - Core and intermediate transit corridors have been identified as a focus for improvements with the multi-hub network structure. These transit corridors will be the initial focus of service improvements to incrementally improve the network operations as a whole. The goal is to achieve an effective mix of 15-, 30-, and 60-minute frequencies on a range of services.
- Maintain and Improve Transit Infrastructure- Enhancing the ridership experience includes ensuring that bus stops, transfer hubs, and terminals are safe, comfortable, and well-maintained. Thus it is recommended that resources be allocated to ensure the general maintenance of transit infrastructure and for improvements where required, including the

possible relocation of the existing Downtown Transit Terminal and improving the Citadel Transfer Center.

Develop Additional Service Planning Standards and Policies

To equip Transit with the tools to best support the objectives of this plan, it is recommended that the current service planning standards be expanded. Service standards are performance measures that help define the role of transit services. The advantage of establishing standards is that they provide a fair, consistent process for determining what and when service changes should be made. Service standards also can help define the community's expectations of the transit system and can ensure that the transit system continues to meet community objectives.

The key service standard metric would be for any proposed services to demonstrate an acceptable level of ridership and revenue return.

Consider New Services and Models

During the consultation process, stakeholders raised concerns regarding the need for new transit connections, particularly to suburban hospitals and military-related destinations. Services to new areas would be required to meet service standards.

New or enhanced services are proposed for consideration along the Union Boulevard corridor, to Memorial North Hospital, to St. Francis Medical Center, to the Air Force Academy, to Peterson AFB and Schriever AFB, and to Fort Carson. Services to military installations require unique methods to create access within secured facilities. These concepts are detailed further in the plan.

Consider High-Capacity Transit

As services and ridership improve and mature over time, there will be opportunities to consider higher-capacity transit services, including 15-minute (or better) frequencies. There may be opportunities to operate limited-stop express services to improve travel times for longer-distance trips within the service area. Bus priority measures could be implemented (e.g. queue jump lanes, dedicated transit lanes) to improve the speed and reliability of services, particularly along corridors with higher levels of congestion. Finally, as ridership capacity becomes limited with the operation of conventional 40' and 60' buses, there are further opportunities to explore Bus Rapid Transit (BRT) and higher-capacity technologies including streetcar and light rail systems.

Consider New Governance

The establishment and success of the Pikes Peak Rural Transportation Authority (PPRTA) has demonstrated the local desire and potential for regional cooperation, long-term funding, and prioritization of transportation as a community asset. The 2011 *Future of Regional Transit Study* (FoRT) brought together a variety of community, business, financial, and government interests to debate and ultimately identify recommendations to address transportation needs and opportunities throughout the Pikes Peak region. This plan is supportive of (and complements) the recommendations included in the FoRT Study.

Measures should be advanced to assure long-term and stable funding for public transportation in the PPACG area. This includes the implementation of a new governance structure for transit. Regional planning, development, funding, and oversight of transit could provide a consistent mechanism for funding and equitable implementation of transit throughout the PPACG area. This regional perspective allows planning and the provision of transit to occur in a balanced manner, in partnership with all of the local governments.

Funding

Federal, state, and regional funding support the operations, maintenance, and expansion of Transit's services—including Mountain Metro fixed-route services, *Metro Mobility* specialized ADA services, *Metro Rides* transportation demand management programs, and additional specialized transportation services provided by area non-profits.

The plan's funding recommendations present the current funding and revenues available for transit, as well as funding implications to maintain and improve the transit system over the course of the plan (to 2040). An expenditure plan has been developed (referred to as the *Fiscally Constrained Plan*) that identifies the priority projects that could be implemented within available funding estimates.

The overall funding estimates were determined in consultation with Transit and PPACG.

Projected funds do not address the full range of transit and transportation needs identified for the PPACG area.

A broader list and discussion of assumptions for transit projects (referred to as the *Unconstrained Plan* or *Vision Plan*) is also included as part of this plan.

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1 Introduction

Preface

In the spring of 2014, the City of Colorado Springs Transit Services Division (Transit) and the Pikes Peak Area Council of Governments (PPACG) partnered to examine the public transit services provided throughout the PPACG area and create a Transit Plan and a Specialized Transportation Coordination Plan as elements to be included in the PPACG *2040 Moving Forward Regional Transportation Plan* (2040 RTP). These plans provide near-, mid-, and long-term visions for potential public transportation growth and improvements in the PPACG area.

This document will serve as the Transit Chapter of the 2040 RTP, and will be included in the RTP appendix.

This chapter presents basic context for the study including purpose and structure of the plan, the study area, and the ultimate goals and objectives to be achieved. The 2040 Regional Transportation Plan – Transit (Transit Plan) examined the current provision of public transit. Since the economic downturn (2007-2010), local and state economies have struggled to regain consistent levels of output, growth, and revenues. While the state has experienced some economic recovery, this has generally been focused on the metropolitan areas of Denver, Greeley, Fort Collins, and Boulder.

The Colorado Springs area has continued an upward trend in economic growth, but at a much slower pace that many other metropolitan areas in the state.

This slow recovery has continued to impact the provision of transit services. Funding for the current transit services is provided through a variety of sources including:

- The Pikes Peak Rural Transportation Authority (PPRTA) taxing district
- The City of Colorado Springs
- Fares and advertising revenues
- Federal and state grants

Transit's focus throughout the economic changes has been on providing the maximum amount of service throughout the service area while maintaining its quality and reliability. This balance has been a significant challenge, but current budget trends have continued to move in a very

measured, but positive direction. The small growth in funding provides the potential to continue to improve service frequencies and reliability.

This plan aims to maximize the service improvements, planning for time frames in near-term (five years), mid-term (10 years), and long-term (20 years) time frames.

Plan Study Area & Basis

Study Area

The City of Colorado Springs is the designated recipient of federal transit funds for the Colorado Springs Urbanized Area (UZA). This study examines and projects the needs of the entire UZA and surrounding urbanizing area in El Paso and Teller Counties. The study area included:

- The City of Colorado Springs
- The City of Manitou Springs
- Portions of Security-Widefield
- Portions of El Paso County
- Portions of Teller County

A graphic depiction of this area is included below in Figure 1.1. The plan study area extends approximately to:

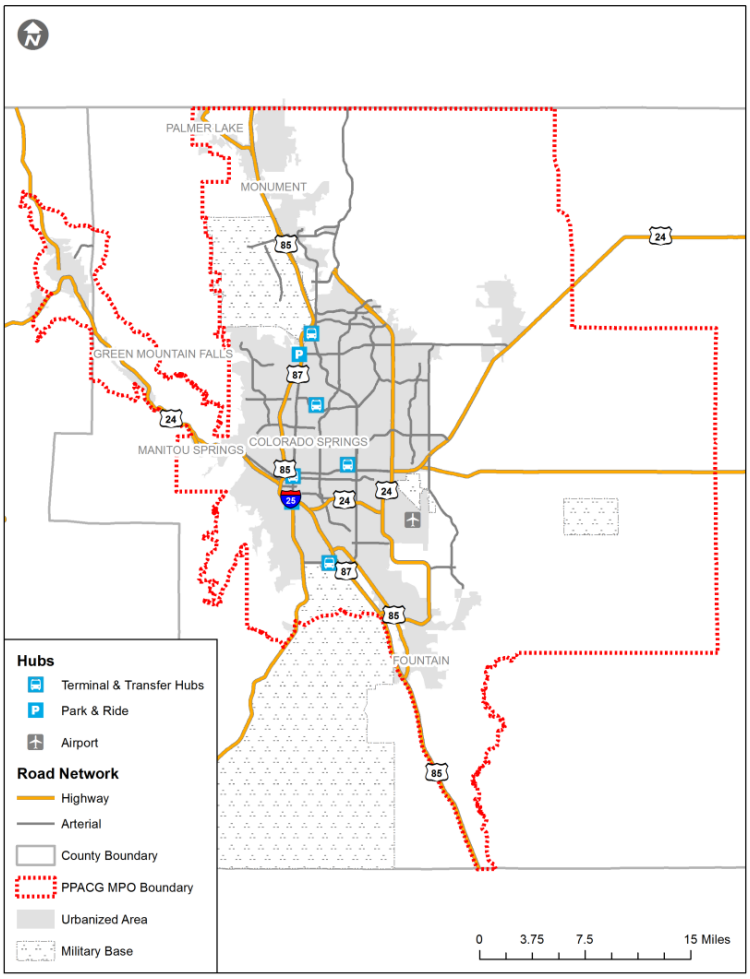
- North – to the Chapel Hills Mall
- South – just into the Security-Widefield area
- East – to Peterson Air Force Base
- West – into the City of Manitou Springs

The plan study area encompasses the current Mountain Metro service area, as well as the broader service areas of Metro Mobility Americans with Disabilities Act (ADA) required transportation and other coordinated providers of specialized transportation services.

Plan Basis

The substantive background, facts, statistics, and financial data are representative of the readily-available information from April to December 2014. Ongoing adjustments to the services and network routing to improve frequency, connectivity, and increase mobility options (many of which are presented in this plan) are anticipated.

Figure 1.1: Plan Study Area



Organization of the Plan

This plan document is structured in six core chapters with additional technical backup included in the appendixes. The information in each chapter provides context for the subsequent chapters. A brief description of each chapter is provided below as a preface to the document.

Chapter 1. Introduction – The first chapter provides general context for the creation of the plan and those decision makers involved. This chapter documents the overarching vision and guiding principles that directed the plan's priorities and recommendations.

Chapter 2. Process – This chapter defines the step-by-step process followed for creation of the plan, identification of the issues, identification of the projects or solutions for each issue, ultimately leading to the recommendations in Chapter 6.

Chapter 3. Area Profile (Transit Audit) – The third chapter documents the background information researched to fully understand the current and future transportation framework. This chapter provides key background data on local demographics, socioeconomic information, and future projections.

Chapter 4. Stakeholder Involvement – This chapter documents the range of stakeholders engaged in the project from inception to the final plan. Several major outreach activities, including public meetings, public presentations, and two online questionnaires were undertaken at key milestones in the project.

Chapter 5. Themes, Initial Options, and Recommendations– This chapter details the identification of various strengths, weaknesses, challenges, and opportunities related to transit service with the study area. With this information as a basis, the team scoped potential transit improvements and created themes to categorize the options. The themes were further evaluated and ultimately formed the recommendations of the plan in the near term, midterm, and long term. The recommendations reflect the best performing transit improvements and the ultimate priorities for the plan.

Chapter 6. Funding Analysis and Implementation Strategies – The final chapter sets out the priority actions and potential funding sources for the recommendations. The recommendations are grouped into either the financially constrained or unconstrained project lists. The fiscally constrained list of recommendations has budgeted funding and is recognized as such in the Regional Transportation Plan. The unconstrained list included critical projects where funding is pending or yet to be formally identified. Those options in the fiscally constrained plan generally focus on the near-term potential improvements.

Plan Leadership & Guidance

Development of the transit and specialized transportation elements of the 2040 RTP are being led by Transit and PPACG staff. Funding for these plan elements includes a combination of funds from Transit (60%) and PPACG (40%).

Staff members from both Transit and PPACG have been the key leaders managing the plans development, budget, and schedule.

The sections below detail the structure of how the team functioned and communicated. Additional details on the specific input provided by each group and how this input directed the development of the plan are included in Chapter 4.

Project Management Team

A project management team (PMT) was created as a body to guide the plan development and provide overall management throughout the process. The management team members included representatives from the City, PPACG, and consultant team members. A list of members of the PMT is shown in Table 1.1.

Table 1.1: Project Management Team Members

Organizations	PMT Members
City of Colorado Springs' Transit Services Division	Transit Project Plan Manager: Brian Vitulli, Planning Supervisor
	Senior Advisor: Craig Blewitt, Director of Mountain Metropolitan Transit
Pikes Peak Area Council of Governments	Specialized Transportation Plan Project Manager: Angel Bond, Mobility Manager
	Senior Advisor: Craig Casper, PPACG Transportation Director
Consultant Team	Various members from the consultant team (Steer Davies Gleave, CDR Associates, OV Consulting)

The PMT met at regular intervals (weekly or bi-weekly) to guide the development and administrative functions of the plans. The PMT was supported by a variety of staff at and PPACG to provide input to the planning process. Participation in select PMT meetings included Transit and PPACG staff from public relations, finance, etc.

Project Partners – Steering Committee

Multiple organizations, agencies, and local governments provided critical input to the plan as project partners and active members of the project's Steering Committee.

The overarching purpose of the Steering Committee was to guide the plan development and provide initial feedback on potential transit and specialized options and improvements.

The Steering Committee members met four times during the project. Each meeting was held at an important milestone in the project to obtain feedback and direction prior to outreach activities with public stakeholders including online questionnaire, focus groups, stakeholder interviews, community meetings, etc.

The Steering Committee members tracked the plan's progress and provided input from the perspective of each individual's jurisdiction or organization. The Steering Committee members included the local jurisdictions and organizations shown in Table 1.2.

Table 1.2: Steering Committee

Steering Committee Members	
Amblicab	Mobility Coordination Committee (MCC)
Colorado Springs Citizens Transp. Advisory Board (CTAB)	City of Colorado Springs Transit Services Division
City of Fountain	Peterson Air Force Base (AFB)
Colorado Springs City Council	PPACG
Colorado Springs Cycling Club	Pikes Peak United Way
Colorado Springs Housing Office	PPACG Community Advisory Committee
Community Transit Coalition	Regional Business Alliance

Steering Committee Members	
El Paso County Commission	School District 11
El Paso County Dept. of Human Services	Silver Key Senior Services
El Paso County Public Health	Springs Rescue Mission
El Pomar Foundation	The Independence Center
Fort Carson	Transit Passenger Advisory Committee
Fort Carson Retiree Activities Council	University of Colorado at Colorado Springs (UCCS)
LiveWell	

In the first meeting of the Steering Committee, members shared their hopes for the results of the project and the overall planning process. The bullets below summarize the key themes for the various goals identified by the Steering Committee members.

- Find ways to support specific populations, including low-income residents, students, aging adults, veterans, choice riders, and those who do not drive
- Increase the volume of transit riders, including choice riders
- Provide education about transit
- Ensure public involvement and outreach is being conducted
- Develop a cohesive system that is consistent with area comprehensive plans
- Identify stable funding sources for transit
- Consider how the transit system can help increase the region's economic vitality
- Build a visionary outlook for the whole transit system
- Consider new technology
- Re-establish connections with Fort Carson
- Reduce parking needs at UCCS by making transit an attractive alternative

Additional details regarding the results of the steering committee meetings and engagement with all stakeholders are detailed in Chapter 4.

Guiding Principles of the Plan

The goals and objectives developed for the 2040 Regional Transportation Plan were adapted by the Steering Committee for use as the guiding principles of both the Transit Plan and Specialized Transportation Coordination Plan.

The *Moving Forward* Regional Transportation Plan addresses all modes of transportation, and is updated at regular intervals to reflect the changing priorities, resources, and needs for the PPACG area.

Goals

Develop a Transit Plan and Specialized Transportation Coordination Plan which:

- Serves as the basis for future planning and grant approvals
- Presents 5-, 10-, and 20-year scenarios
- Creates strong stakeholder input and buy-in
- Is aligned with state and federal plans
- Builds on the goals and performance measures set forth in the 2040 RTP

Objectives

The plan objectives include:

- Provide transportation choice
- Improve access to jobs, schools, medical facilities, and other services, especially for people without other transportation options
- Create efficiencies and improve cost effectiveness of services
- Provide congestion relief
- Promote environmental stewardship
- Promote economic vitality
- Promote the coordination of public, private, and non-profit transportation services

The goals and objectives were referenced throughout the development of the plans to ensure consistency with the broader 2040 RTP and to ensure focus on the critical principles for each plan element.

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2 Process

Context

This chapter is intended to provide a clear understanding of the process for identification and examination of the transit and specialized-transportation recommendations presented in the two plans. While this chapter focuses on the process, the examination of potential transit improvements and the recommended outcomes are presented in detail in Chapter 5.

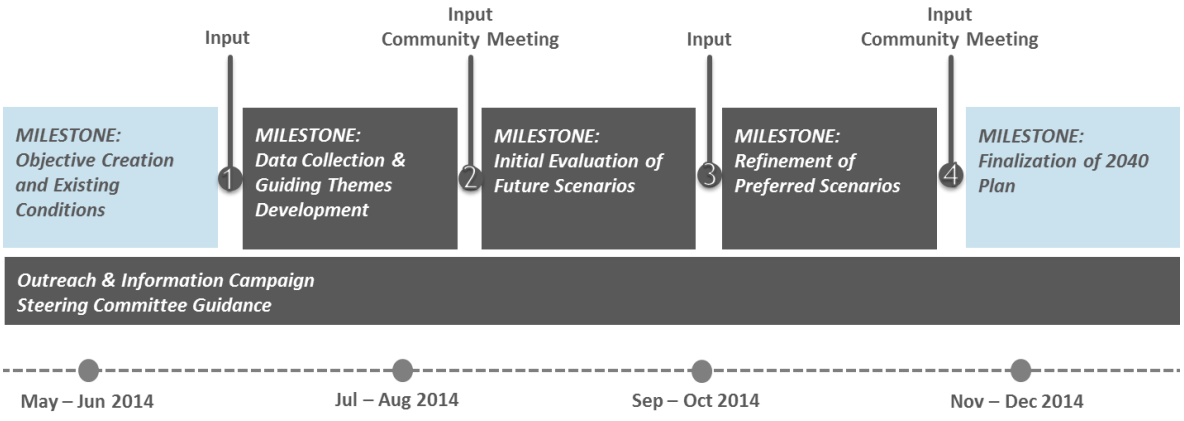
Work began in summer 2014 with the initial Steering Committee meeting. The Committee reviewed and confirmed the process for identifying and ultimately determining the recommendations for both the Transit Plan and Specialized Transportation Coordination Plan.

The first Steering Committee and community meetings were used to explain the process, obtain input, and confirm direction before advancing.

The project process started with the existing transit scenario and presented broad transit service options to residents, the business community, major employers, transit users, potential transit users, and others for input. Cycles of gathering and analyzing input and refining the options were used to develop the final recommendations.

Figure 2.1 graphically details the general steps in the process.

Figure 2.1: Process



The two major levels of examination included identification and community review of the guiding themes and then analyzing transit scenarios as potential recommendations.

Four key themes were identified in the initial phases of the plan development for consideration by project stakeholders.

These two key levels represent the points where potential transit improvements were advanced in the process. The initial themes identified included:

- Theme 1: Focus on the existing service area
- Theme 2: Improve service hours and frequencies
- Theme 3: Improve connectivity, transfers, and hubs
- Theme 4: New service and new service models

The themes are discussed in detail in Chapter 5. Table 2.1 provides a summary of each level of examination and the outreach activities completed.

Table 2.1: Examination and Outreach

Examination	Definition	Outreach Activities Completed
Guiding themes	The initial identification (scoping) and examination of the full range of potential transit ideas. The potential ideas were organized into broader 'themes' for discussion and input with stakeholders.	• Multiple PMT meetings • Steering committee meetings #1 and #2 • Stakeholder questionnaire #1 • Community meeting #1 completed • Stakeholder focus groups and interviews
Examination of scenarios	This step included identifying specific transit improvements based on the broader themes for transit. These transit improvements were ultimately refined to form the plan's recommendations in 5, 10, and 20 year timeframes.	• Multiple PMT meetings • Steering committee meetings #3 and #4 • Stakeholder questionnaire #2 • Community meeting #2 completed

Criteria

The examination of scenarios included considering each potential improvement against various criteria.

Examining the criteria against each of the potential transit improvements helped to identify the best performers for ultimate inclusion as recommendations in the plan.

The criteria were also based on the broader guiding principles for the plans. Application of criteria included both quantitative and qualitative assessment. The criteria helped to guide the decision making, but the ultimate determination of the recommendations was based on input from Transit, PPACG, the steering committee, and input from public stakeholders. Table 2.2 presents the criteria and a definition.

Table 2.2: Criteria Categories

Categories	Definition
Fiscal	Examines potential costs, funding, phasing
Mobility	Considers the achievement of multimodal connectivity across the PPACG area
Community	Presents the potential benefits and/or impacts to local stakeholders
Deliverability	Considers the technical opportunities and constraints for developing the transit improvements

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3 Area Profile – Transit Audit

Introduction

The transit audit chapter provides the base information and existing conditions for Transit and PPACG as they relate to the fixed-route transit system in the PPACG area.

The transit audit outlines the existing transit system, its performance, and presents a profile of the region's population, demographics, and mobility.

This section begins with a description of Transit, describing demographic details relevant to fixed transit service, data related to the existing system, connectivity components to encourage access to bus stops, funding information, policy and plan review, and concludes with the peer cities review. The peer cities review provides a brief comparison of similar fixed-route transit systems in communities across the country.

Mountain Metropolitan Transit Profile

Transit is the City of Colorado Springs Transit Services Division. Transit staff administers contracted services to provide a number of public transportation services in the Colorado Springs metropolitan area, including Mountain Metro fixed-route bus service, Metro Mobility ADA-required paratransit service, and other specialized transportation services provided by area non-profit agencies. Transit also provides alternative transportation options through Metro Rides programs.

Community Profile

In addition to people who do not have access to a household vehicle, transit-dependent population groups may include low-income citizens, students, non-drivers, people with disabilities, and seniors.[1] It is widely accepted within the transit literature that a higher population or residential density yields greater transit use.[2]

[1] Litman, Todd. *Transit Price Elasticities and Cross-Elasticities.* 2004. Journal of Public Transportation. 7.2: 37-58. Web. December 19 2014. <**http://www.nctr.usf.edu/jpt/pdf/JPT%207-2%20Litman.pdf**>

[2] *Transit and Urban Form.* 1996. TCRP Report. 16.1: 26-37. Journal. December 23, 2014. <**http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_16-1.pdf**>

Additional factors influence transportation decision making in places with higher density, including employment centers, corridor characteristics, transit service and other policies.[2] For this transit audit, the project team presented multiple data points to provide a clear profile of the demographics and land use for the PPACG area. This information helped to identify both the areas of transit-supportive land use and infrastructure; as well as gaps in the PPACG area where improved infrastructure and adjusting land uses could provide better mobility options for residents.

All data included in this section comes from the 2010 and 2040 small-area forecasts from PPACG and the US Census Bureau's 2006-2010 American Community Survey (ACS). Not all data was available consistently for each time frame examined. Therefore, not all data was forecasted for both 2010 and 2040, as detailed in Table 3.1.

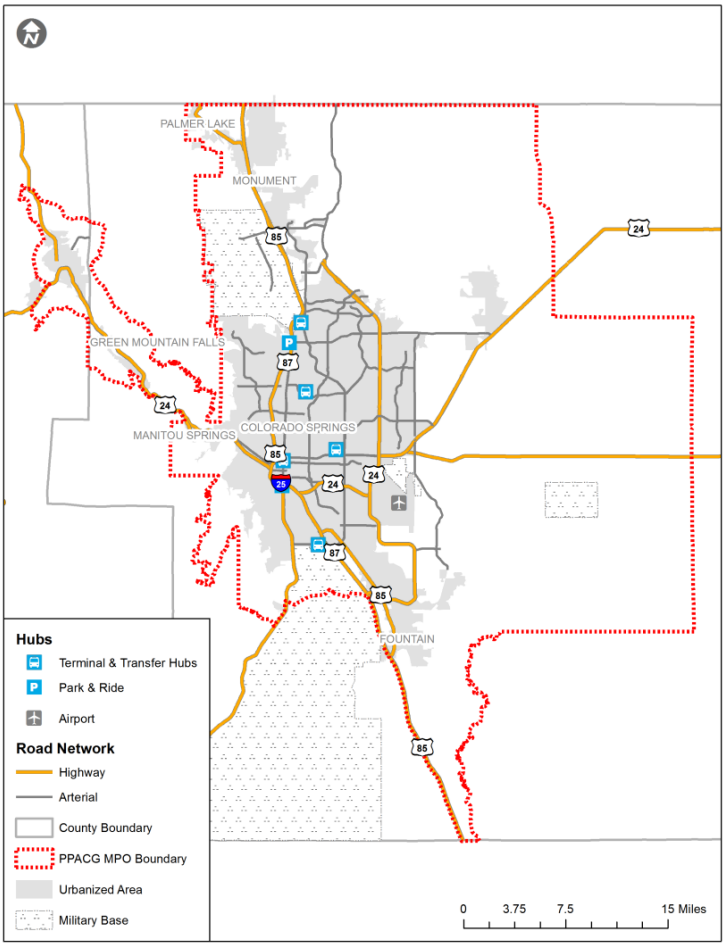
Table 3.1: Overview of Community Profile Demographic Information

Category	Variable	Data Source	2010	2040
Population		Small area forecast	✓	✓
Employment		Small area forecast	✓	✓
Income		Small area forecast	✓	✓
Age	Seniors	ACS	✓	
	Students	Small area forecast	✓	✓
Vehicles available		ACS	✓	

Study Area & Region

Both the ACS and small-area forecasts cover the entire PPACG area, which includes the urbanized and urbanizing portions of Teller and El Paso Counties. This provides a frame of reference for comparison and identifies similarities and differences since these geographic areas differ from one another in land use characteristics that have implications for transit. Different services will work in different geographic areas based on the demographic makeup. Figure 3.1 shows the study area and the surrounding region.

Figure 3.1: Study Area and PPACG Area



Population Density

The population within the urbanized area is anticipated to grow by approximately 100,000 people to just more than half a million people by 2040. The PPACG area is planned to grow a little over one percent from slightly more than half a million people to approximately 853,500 people by 2040. The statewide growth rate for Colorado is anticipated to be approximately 1.7 percent between 2010 and 2040.[3] Table 3.2: breaks down the 2010 and 2040 populations, presenting the figures for the entire PPACG area, all urbanized areas, and the Colorado Springs urbanized area.

Table 3.2: Population Estimates in 2010 and 2040

Area	2010 Population	2040 Population	Growth Rate[4]
PPACG area	603,600	853,500	1%
Urbanized areas	531,100	667,000	1%

[3] *Population Totals for Colorado and Sub-state Regions*. Colorado Department of Local Affairs, 2014. Web. December 10, 2014. <**http://www.colorado.gov/demography**>

[4] Rounded to the closest round percent.

Area	2010 Population	2040 Population	Growth Rate[4]
City of Colorado Springs	409,500	558,200	1%

In 2040, people are anticipated to live in slightly more-concentrated areas around the downtown area and along the Academy Boulevard corridor. While the population density is slightly more concentrated within the urbanized areas, the population is largely spread out throughout the entire PPACG area. This growth pattern continues to perpetuate the sprawling nature of the PPACG area. Figure 3.2 graphically presents PPACG area population in 2010 and Figure 3.3 the forecasted population in 2040.

Figure 3.2: Population in 2010

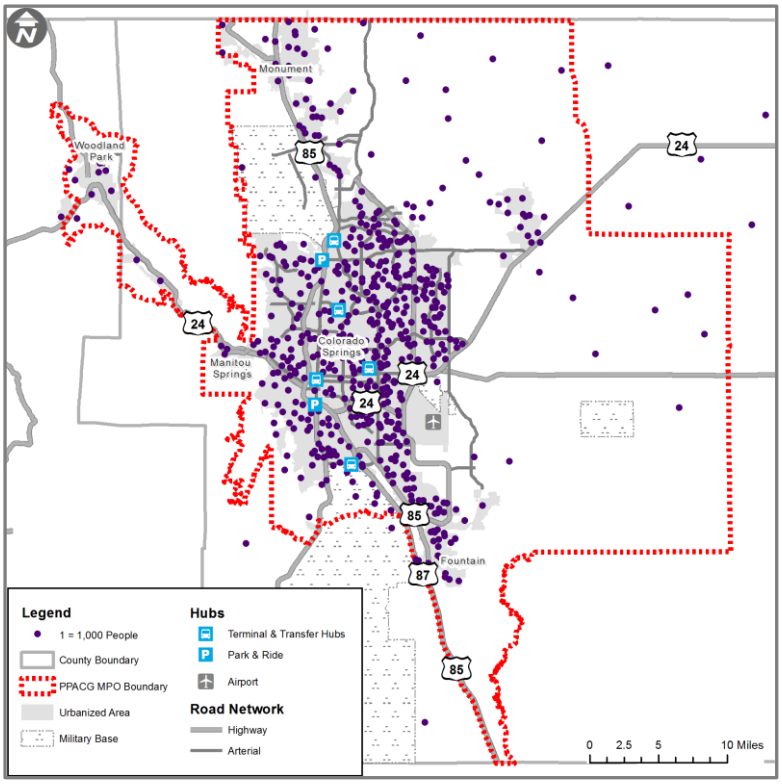
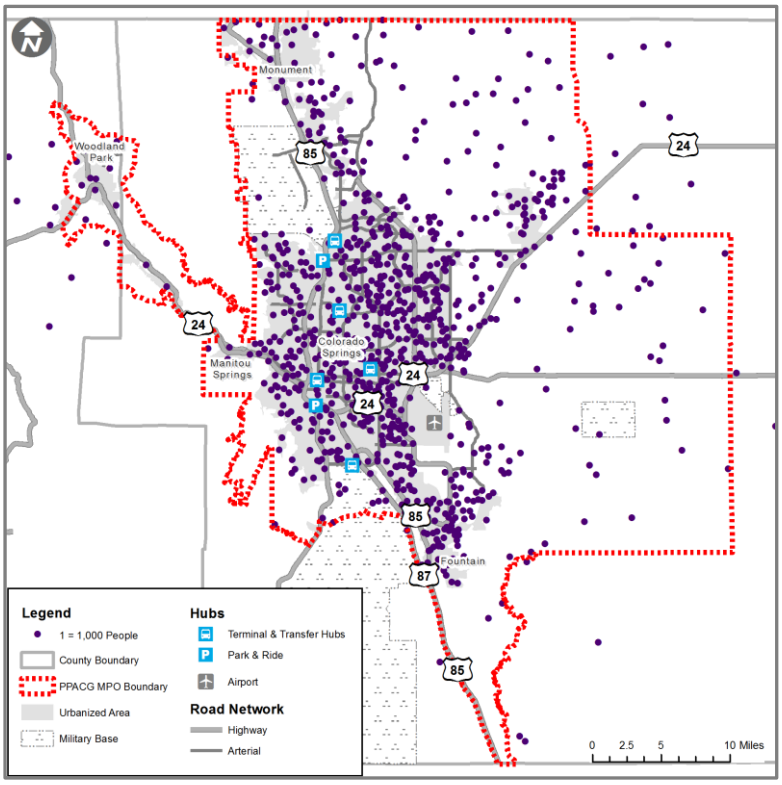


Figure 3.3: Population in 2040



Household Income

Household income is one of the greatest factors influencing transit ridership. Although not the case for all transit agencies, many transit riders tend to have lower household incomes than the greater population. Based on the available data, it appears low-income households would increase by one percent across the PPACG area. The absolute numbers grow in line with the overall population growth.

The majority of low-income households fall within the urbanized areas of the PPACG area.

Table 3.3, Figure 3.4 and Figure 3.5 shows the different concentrations of low-income households in 2010 and 2040.

Table 3.3: Low-Income Households in 2010 and 2040

Area	2010 Households	2040 Households	Growth Rate
PPACG area	34,800	47,800	1%
Urbanized area	32,400	42,200	1%

Figure 3.4: Low-Income Households in 2010

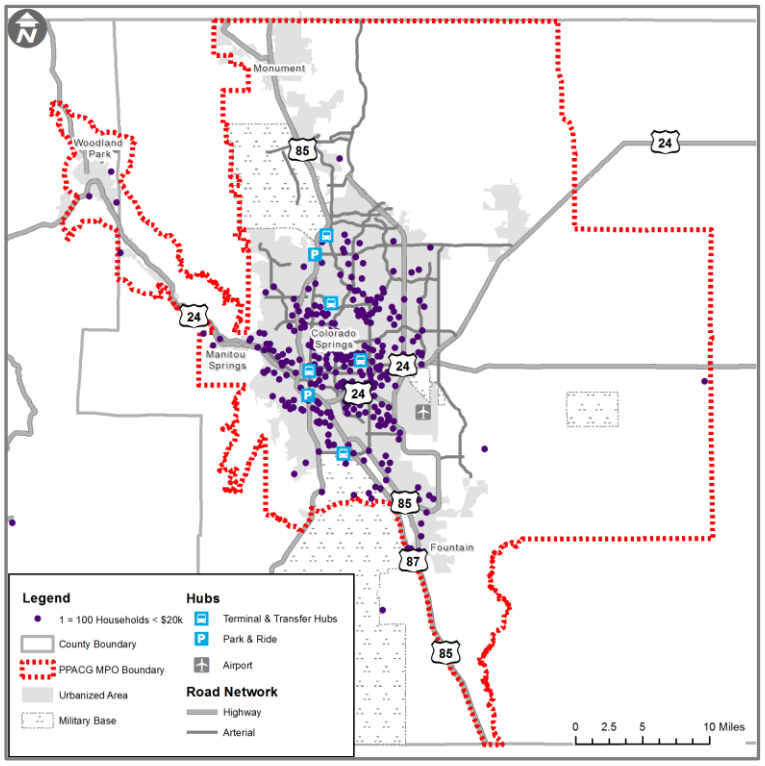
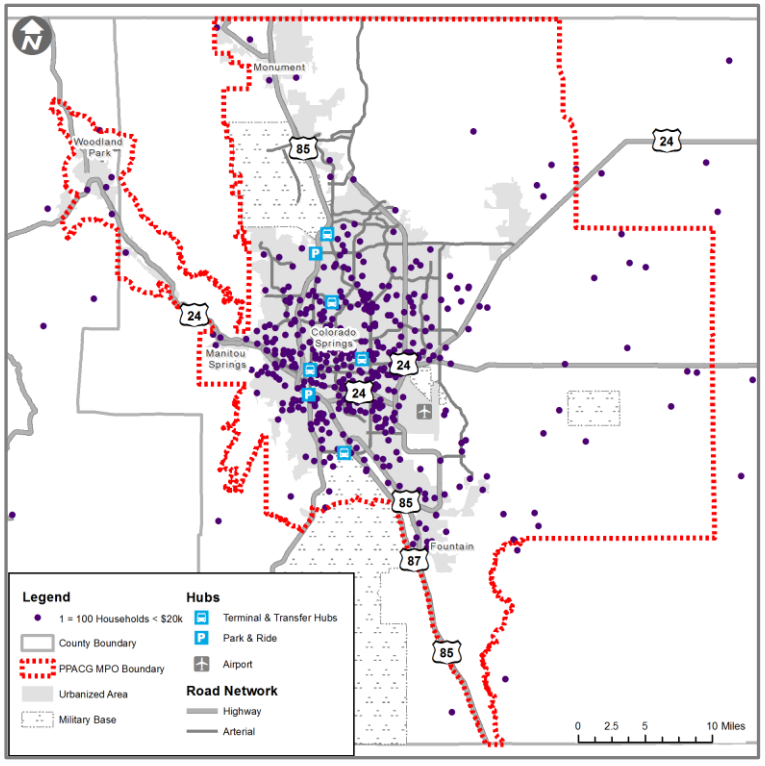


Figure 3.5: Low-Income Households in 2040



Household Vehicles Available

Those without access to a household vehicle tend to rely on transit more than the general population for daily transportation needs. Approximately five percent of households in the PPACG area are without a vehicle. It is likely those without a personal vehicle have access to a vehicle (or rides from family or friends), but this still provides more limited access than a personal vehicle can provide.

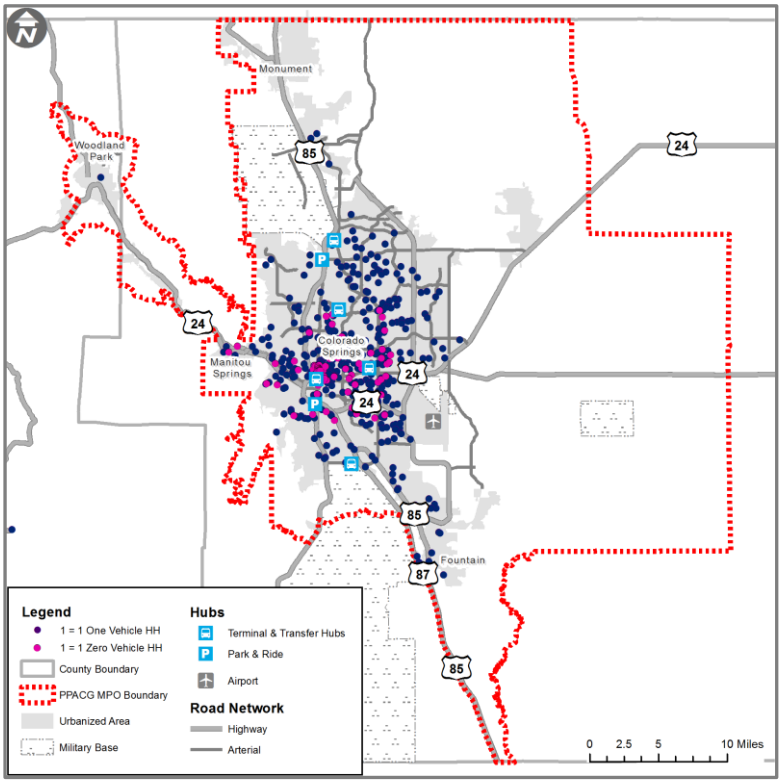
There is a slightly higher percentage of zero-vehicle households within the urbanized areas.

As Table 3.4 shows, approximately five percent of those within the PPACG area do not own a vehicle; about 20 percent are one-vehicle households. Figure 3.6 shows the geographic distribution across the area.

Table 3.4: Zero and One Vehicles per Household in 2010

Area	Zero	% of Households	One	% of Households
PPACG area	12,200	5%	69,300	19%
Urbanized area	11,900	6%	65,100	24%

Figure 3.6: Household Vehicles Available in 2010



Age

A majority of transit riders nation-wide are within the ages of 25 and 54.[5]The City of Colorado Springs is also home to many college students who are more likely to be transit riders; college students comprise approximately 11.5 percent of all transit riders.

Table 3.5 shows how the college population will increase across the entire PPACG area.

While there is a slightly greater density of college students within the urbanized areas, their growth rate will be consistent across the entire PPACG area.

Based on the 2010 small-area forecast, the current population of college students is mostly concentrated around the area's major colleges and universities. Several technical institutes and smaller colleges are located throughout the PPACG area. Area institutions include:

- Regis University
- Colorado College
- Pikes Peak Community College (PPCC)/ PPCC Downtown Studio Campus
- University of Colorado – Colorado Springs (UCCS)
- Colorado Technical University, Colorado Springs
- Webster University
- IntelliTec Medical Institute
- Colorado Christian University
- Devry University Colorado Springs
- Everest College
- IntelliTec College
- National American University
- Newman University
- Nazarene Bible College

Table 3.5 presents the college student population.

Table 3.6 presents the senior population. A slightly greater concentration of seniors is located within the urbanized areas of the PPACG area. According to the State of Colorado Demography Office, the total senior population for both Teller and El Paso counties is approximately 86,000.

The senior population is expected to grow to about 171,000 by 2040 in this area.[3] This is almost a three percent increase in the senior population.

[5] American Public Transportation Association. 2007. A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys. Accessed 2014 from: **http://www.apta.com/resources/statistics/Documents/transit_passenger_characteristics_text_5_29_2007.pdf**.

Table 3.5: College Student Population

Region	2010 College Students	2040 College Students	Growth Rate
PPACG area	31,100	48,100	2%
Urbanized areas	27,600	42,800	2%

Table 3.6: Senior Population

Region	Senior 2010 Population
PPACG area	57,700
Urbanized areas	52,000

Figure 3.7: College Students in 2010

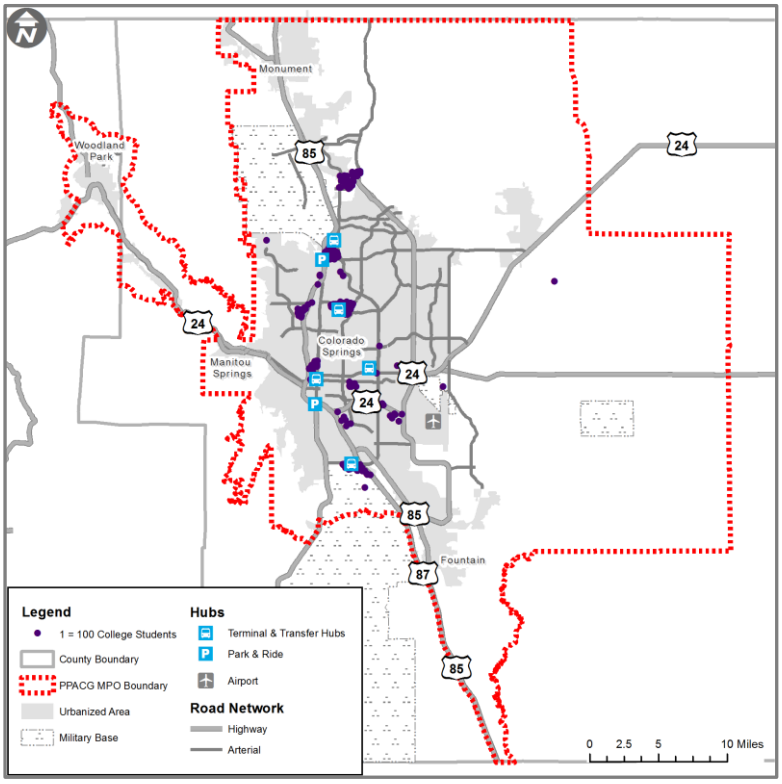


Figure 3.8: College Students in 2040

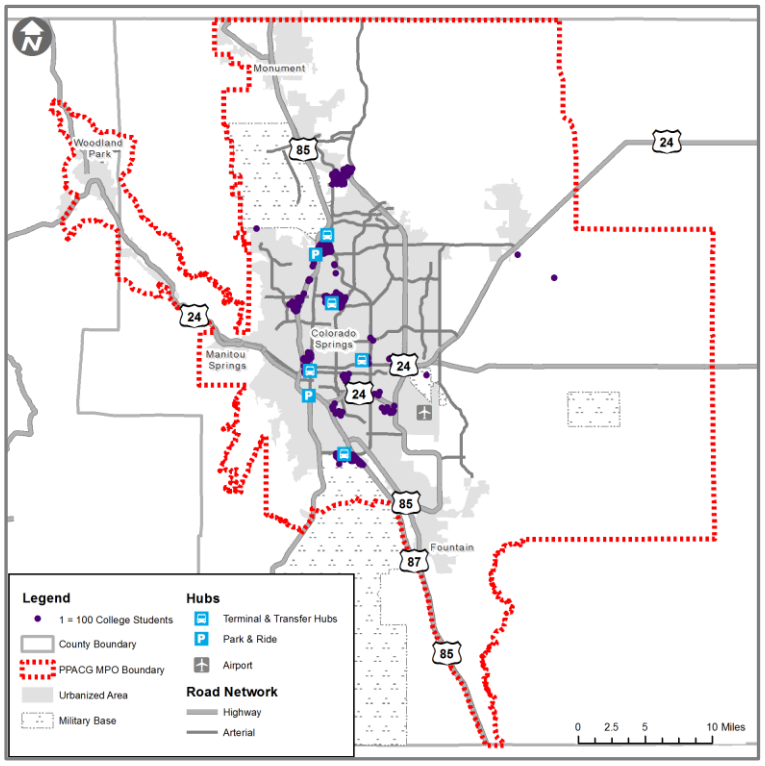
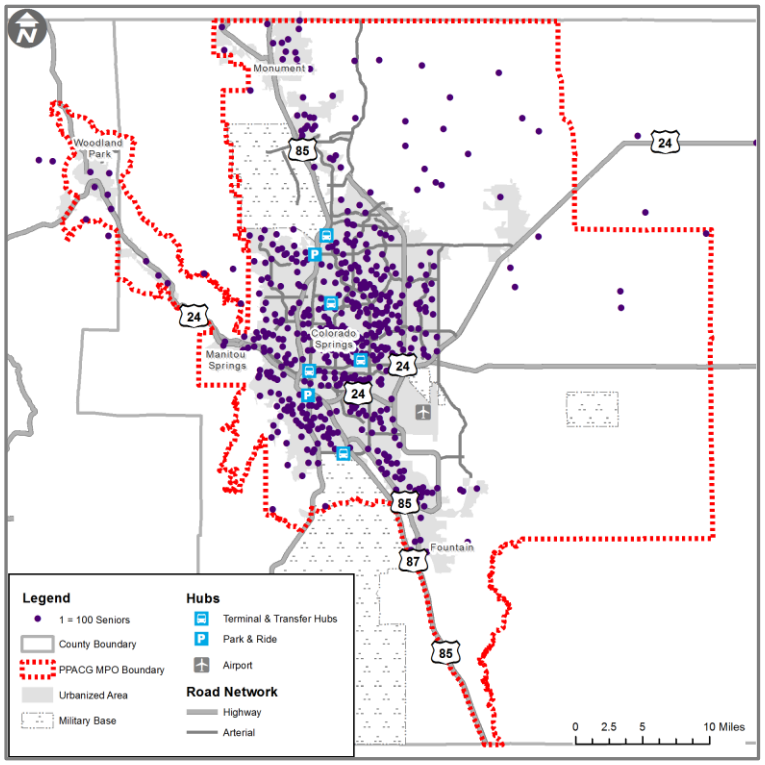


Figure 3.9: Senior Population in 2010



Employment Density

Oftentimes, the commute trip is the easiest trip for people to transition to transit because it is usually more of a routine than other trips. However, using transit for those who work shift jobs and hours outside the most common 9 AM to 5 PM schedule may be more difficult since most transit service runs during the day, with peak times in the morning and afternoon rush hour time periods.

Table 3.7 shows the current and projected employment numbers for the area. The entire PPACG area will experience approximately the same amount of growth.

Table 3.7: Employment in 2010 and 2040

Region	2010 Employment	2040 Employment	Growth Rate
PPACG area	319,900	470,600	2%
City of Colorado Springs	231,100	364,600	2%

Figure 3.10: Employment Density in 2010

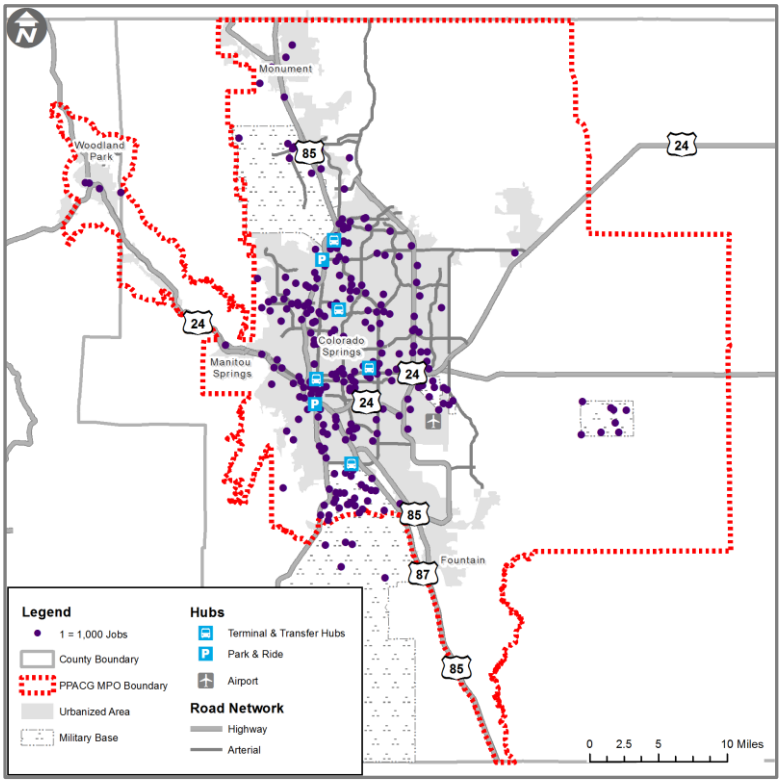
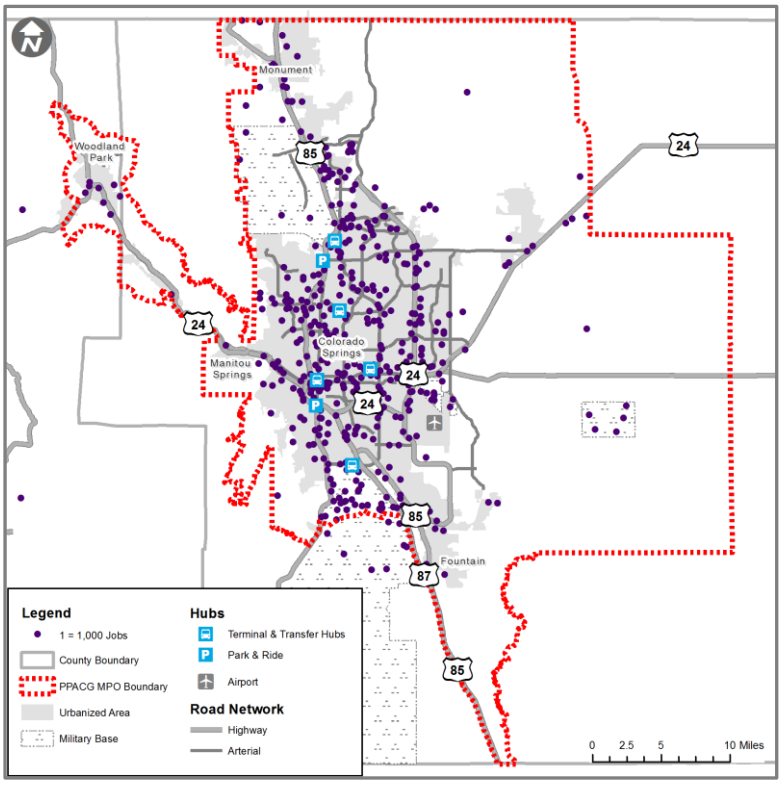


Figure 3.11: Employment Density in 2040



Major Employers

Within the City of Colorado Springs, the top ten employers comprise approximately a third of all employment within El Paso County.[6] Employing just more than 12 percent of all the employment is Fort Carson.

The top four employers are military installations—and account for nearly 25% of all employment within El Paso County.

Table 3.8: Top Employers in the City

Rank	Employer	Percentage of Total County Employment
1	Fort Carson Army Base	12.3%
2	Peterson Air Force Base	4.1%
3	Air Force Academy	3.8%
4	Schriever Air Force Base	3.2%
5	Memorial Health Services	1.8%
6	Colorado Springs School District 11	1.5%

[6] Skinner, Kara. *Comprehensive Annual Financial Report.* 2013. City of Colorado Springs. Report. December 9, 2014. <**http://coloradosprings.gov/sites/default/files/finance/Accounting/cafrs/final_2013_cafr.pdf**>

Rank	Employer	Percentage of Total County Employment
7	Academy School District #20	1.1%
8	Penrose-St. Francis Health Services	1.1%
9	City of Colorado Springs	0.9%
10	El Paso County	0.8%

Major Industries

The top five industries in the City of Colorado Springs include: 1) Retail; 2) Health Care, Social Assistance; 3) Accommodation and Food Services; 4) Education; and 5) Professional.[7]

Table 3.9: Top Industries in the City

Sector	Percent
Accommodation and Food Services	11.4%
Retail	11.8%
Health Care and Social Assistance	11.7%
Education	11.0%
Professional	9.2%
Admin, Support, Waste Management and Remediation	7.9%
Manufacturing	5.8%
Finance and Insurance	5.3%
Construction	4.9%
Other Services	4.1%
Information	3.8%
Public Administration	3.4%
Transportation And Utilities	2.9%
Wholesale Trade	2.2%
Arts, Entertainment, Recreation	1.8%
Real Estate and Rentals	1.8%
Management of Companies	0.5%
Agriculture and Mining	0.2%

Summary

While growth is projected to occur over the next 25 years until 2040, the growth generally is not concentrated within the City of Colorado Springs or urbanized area. Many of the demographic factors will continue to spread across the entire PPACG area and make it difficult for transit services to provide effective service.

[7]U.S. Census Bureau. 2013. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <**http://onthemap.ces.census.gov/>**

Travel Patterns

Developing potential improvements to the transit network requires an understanding of the predicted travel patterns. Through the origin-destination modeling data obtained from PPACG, a comparative assessment of the changes in travel patterns was completed for the 2010 and 2040 timeframes.

The project team examined data for future origins and destinations within the PPACG area to predict what areas may develop higher or lower transit demand.

The model was organized into 39 traffic zones (geographical areas) to observe changes in travel patterns between now and 2040.

Figure 3.12 and Figure 3.13 highlight the ten traffic zones with highest number of daily trip origins and destinations in 2010 and 2040. The data was normalized by dividing the number of trips by the area of each traffic zone to account for various sizes of zones. The downtown area, the areas around the Citadel and the Chapel Hills Malls, Pikes Peak Community College, Platte Avenue, and Cascade/Nevada Avenue showed the highest concentrations of trips in both 2010 and 2040. The areas along Colorado Avenue and around the Broadmoor Towne Center were included in the top ten origins and destinations. However, the growth in these areas is surpassed in later years by the areas south of the downtown and along the southern sections of Academy Boulevard.

Figure 3.12: Heavily Traveled Zones 2010 (All Modes)

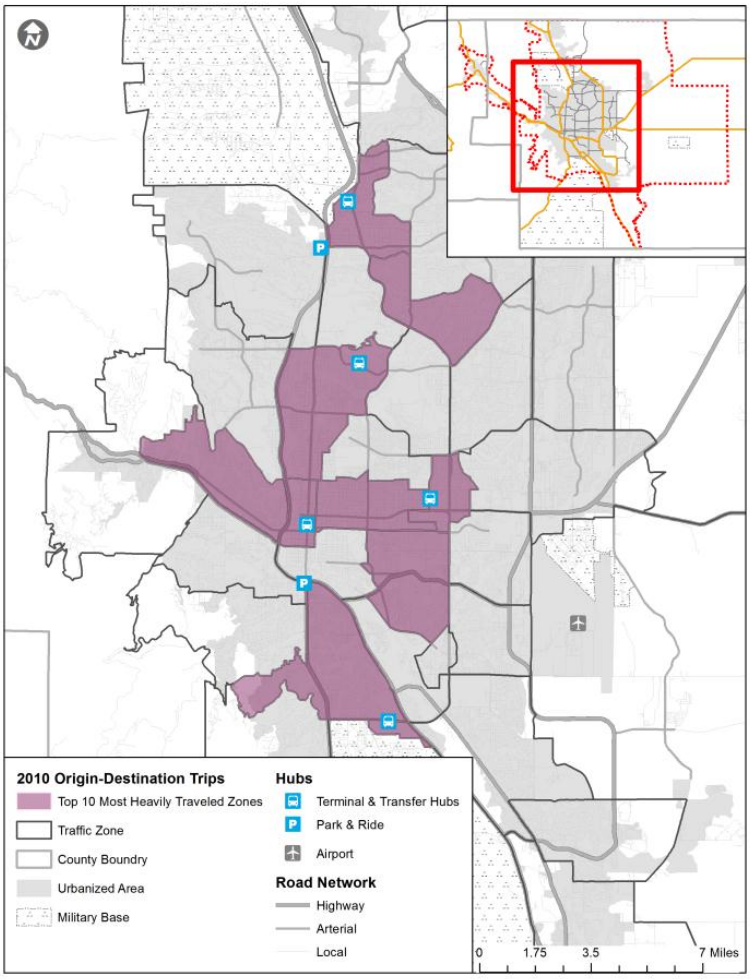


Figure 3.13: Heavily Traveled Zones 2040 (All Modes)

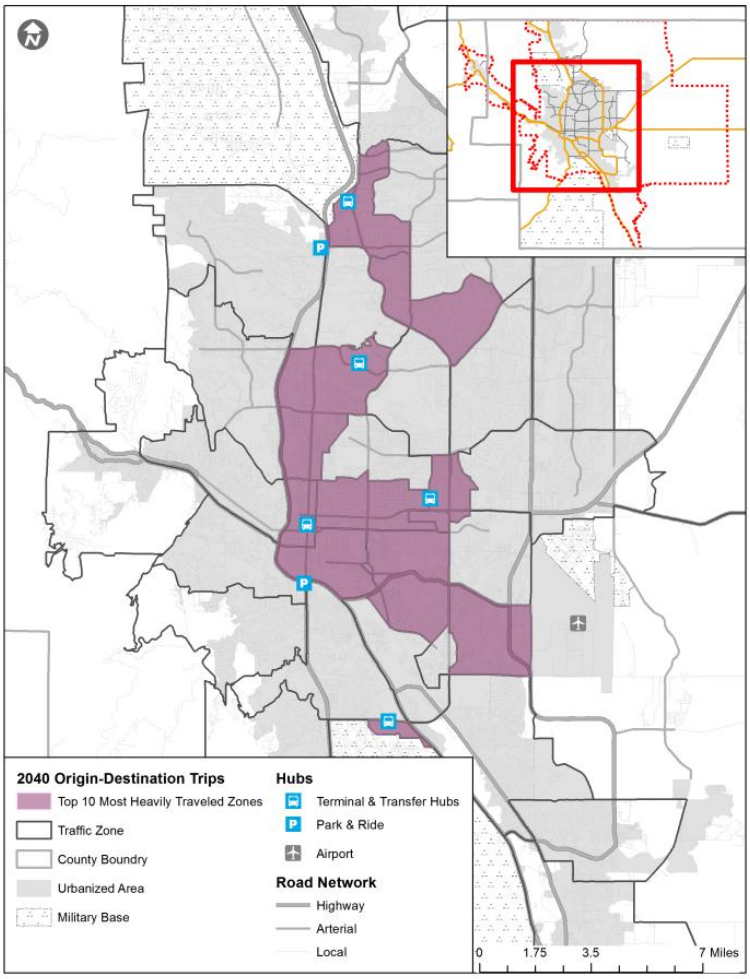


Figure 3.14 and Figure 3.15 illustrates the travel flows made by all modes between traffic zones within the existing service area in 2010 and 2040. To improve the visibility of these maps, only those travel flow pairs greater than 2,000 daily trips are shown. The thickness of the travel flow lines represents the scale of trips between super zone pairs. Comparing the two maps, the trips will likely increase during this 30-year period.

Figure 3.14: Daily Travel Patterns 2010 (All Modes)

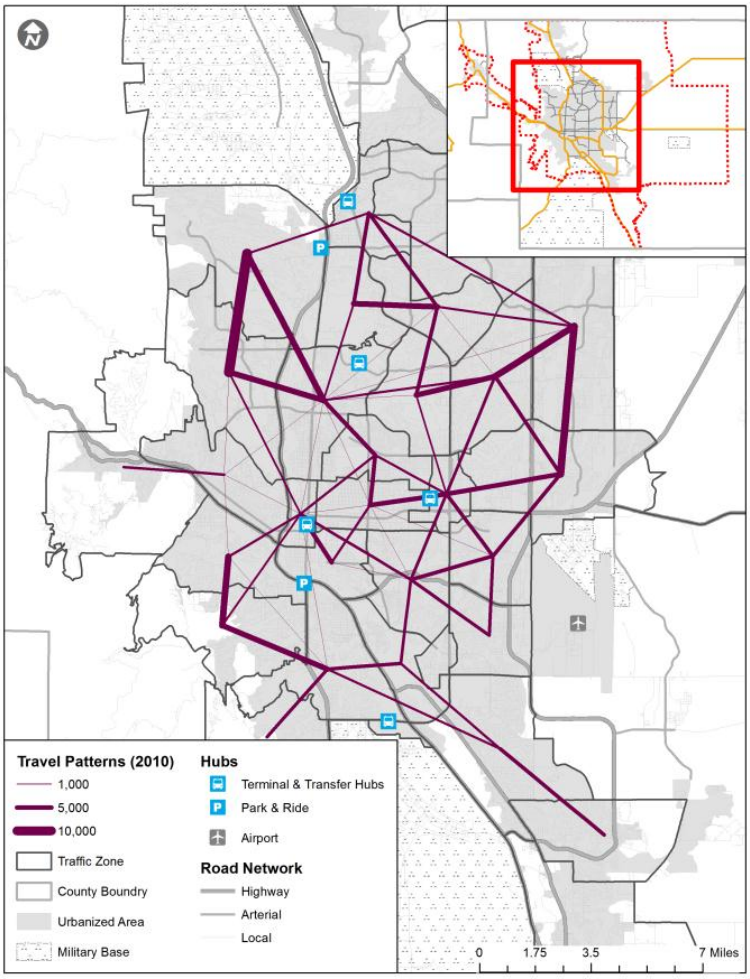
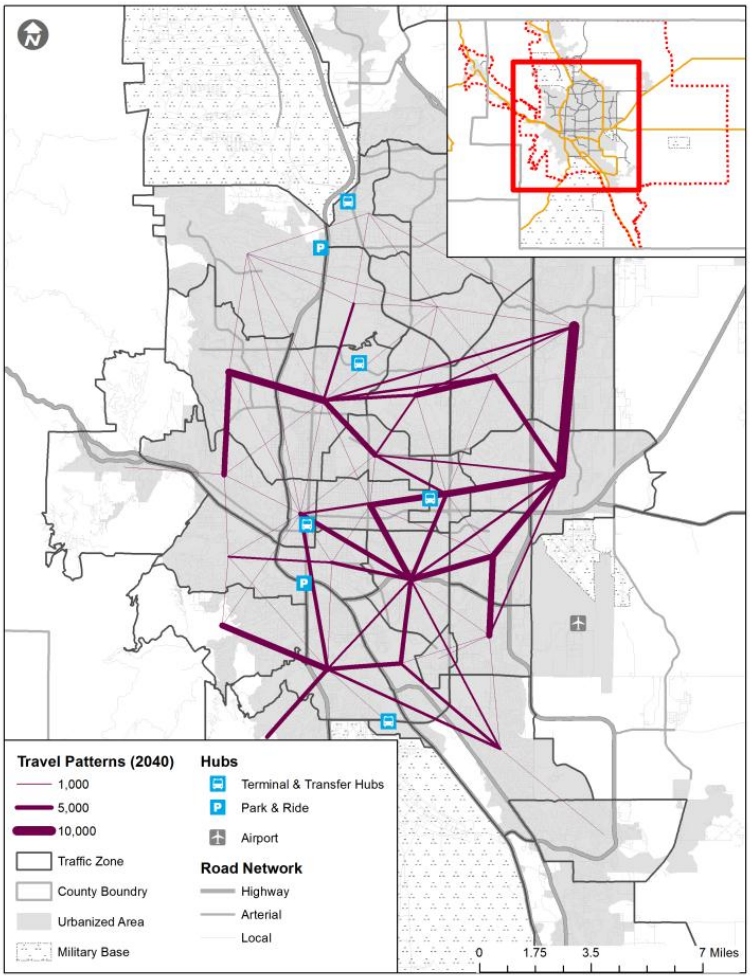


Figure 3.15: Potential Daily Travel Patterns 2040 (All Modes)



Summary

Considering the above factors, the downtown traffic zone will continue to be an important hub and destination for the transit network. Figure 3.14 shows that a high amount of trips start or end in the downtown. Both the 2010 and 2040 maps present a significant number of trips radiating from this concentrated traffic zone. The Citadel Mall area and the Platte Avenue corridor also show a notable number of lines converging in both maps. Additionally, the Nevada Avenue corridor, including UCCS, is an important destination to serve with the transit network.

Mountain Metropolitan Transit System

The substantive background, facts, statistics, and financial data are representative of the readily-available information in 2014. Ongoing adjustments to the services and network routing to improve frequency, connectivity, and increase mobility options (many of which are presented in this plan) are anticipated.

Mountain Metro provides a majority of the fixed-route service in the PPACG area, with the majority of service occurring during the weekday and limited weekend service. Mountain Metro operates from about 5:30 AM - 9:45 PM on weekdays, on Saturdays from 6:30 AM - 7 PM, and

Sundays from 7:30 AM to 6 PM.[8] No service is provided on New Year's Day, Thanksgiving Day and Christmas Day.

In addition to bus routes within the City of Colorado Springs, Mountain Metro provides service into Manitou Springs and south into the Security-Widefield area.[9]

Mountain Metro Service Area

The fixed-route bus network provides service primarily within the City of Colorado Springs. The service area extends west into the City of Manitou Springs, south into the Security-Widefield area, east to Peterson Air Force Base, and north to the Chapel Hills Mall. Other major destinations include: the Citadel Mall, the Colorado Springs Senior Center, El Paso County Department of Human Services, UCCS, Colorado College, the Broadmoor Hotel, PPCC, Memorial Hospital Main, and the U.S. Social Security Office. Mountain Metro Mobility paratransit service is also provided within three quarters of a mile of the fixed routes as required by ADA. Figure 3.16 shows the service area and all the routes.

Fixed Route Service Hours and Frequencies

Fares

The current Mountain Metro adult fare is $1.75 per ride.[10] Passengers may request a transfer to continue their journey. Transfers may be used on a different route, not to continue along the same route or for the return trip. A number of special fares apply to specific groups, including: youth, Medicare, people with disabilities, and seniors.[10] Other non-cash tickets are available to passengers, including a day pass, 31-day pass, 20-ride ticket and the Summer Haul Pass for youth during summer months.[10] Figure 3.16 summarizes the operational details of all routes.

Service Days

All 21 routes (data summer 2014) provide weekday service, but select routes provide evening , weekend and holiday services. Approximate hours of operation for Mountain Metro bus service are:

- Monday - Friday: 5:30 AM - 9:45 PM
- Saturday: 6:30 AM - 7:00 PM
- Sunday: 7:30 AM - 6:00 PM

[8] *Operating Hours and Holidays.* City of Colorado Springs. October 22, 2014. <**http://www.springsgov.com/Page.aspx?NavID=4558**>
[9] *Mountain Metropolitan Transit Services.* 2009. City of Colorado Springs. November 19, 2014. <**http://transit.coloradosprings.gov/transportation/public-transportation/about-mmt/mountain-metropolitan-transit-services**>
[10] *Fares & Tickets.* City of Colorado Springs. November 20, 2014. <**https://www.springsgov.com/page.aspx?navid=994**>

Mountain Metro does not provide service on New Year's Day, Thanksgiving Day and Christmas Day. Buses will be running according to the Sunday schedule (service on routes 1, 3, 5, 7, 9B, 11, 25) on Memorial Day, Independence Day and Labor Day.

Service Hours

Most of the service provided occurs during the peak periods and during the daytime. Peak hour service refers to the two times during the day when most people are traveling to or from work, generally from 6-9AM and 3-6PM. Based on current service schedules, frequencies are similar for the peak periods and mid-day services. For the purposes of Mountain Metro Transit and this report, we define the morning peak as 5-9AM and the afternoon peak as 3-6:30 PM.

Table 3.10 shows the number of total runs (broken out by time of day) by route. Almost all routes that only provide weekday service run between approximately 6 AM and 6 PM. Only Route 9A provides slightly more service from 5 AM until 8 PM south bound and from 6 AM until 7 PM north bound.

All routes providing service on Saturdays run from approximately 6 AM -7 PM. This amounts to a total of approximately 13 service hours for all nine routes (2014) that provide service on Saturdays. Routes running on Sundays have slightly decreased service hours. All routes providing service on Sundays run from approximately 7 AM - 6 PM. This results in a total of approximately 11 service hours for the seven routes (2014) that provide service on Sundays.

Figure 3.16: 2014 Mountain Metro Service Map

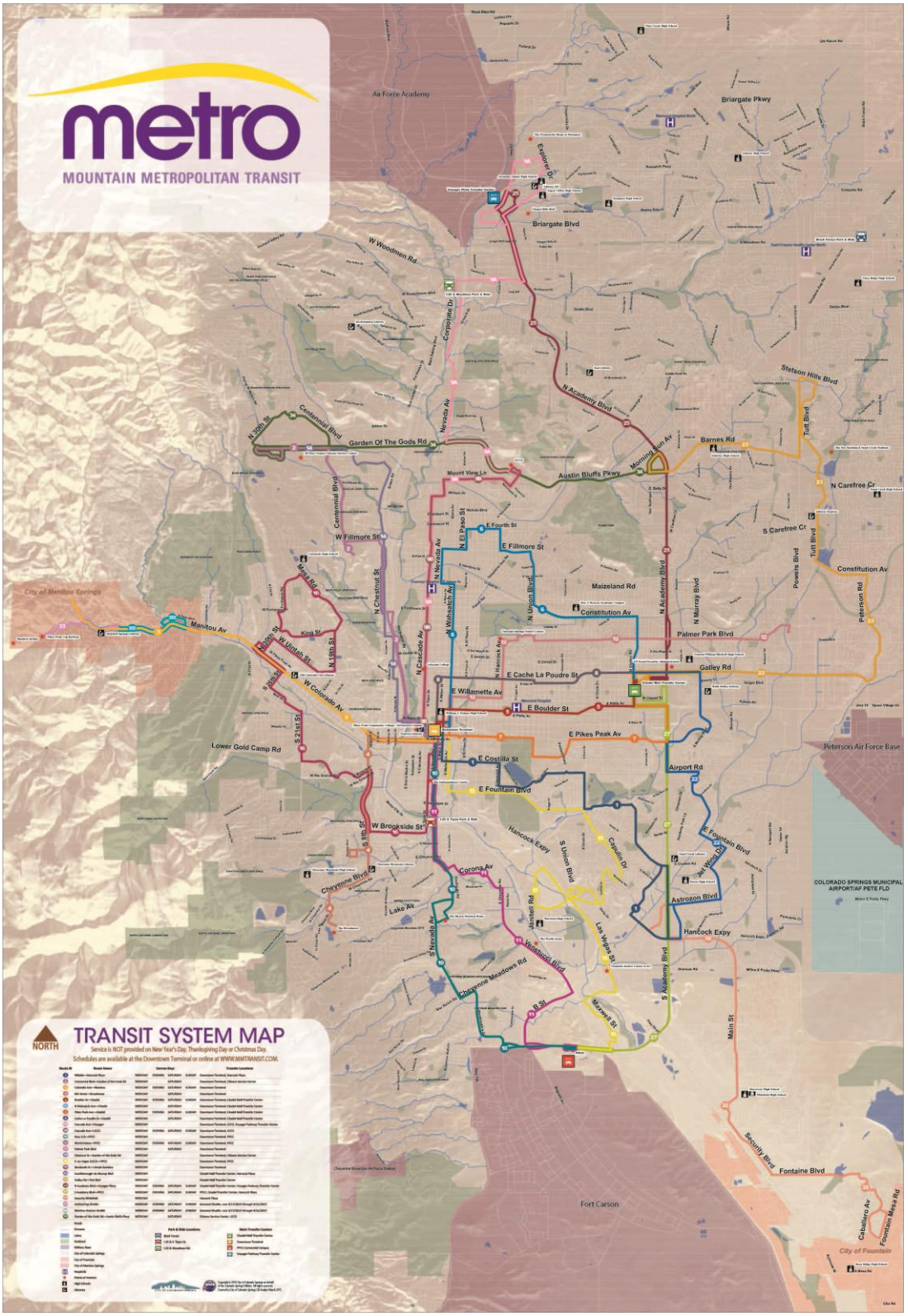


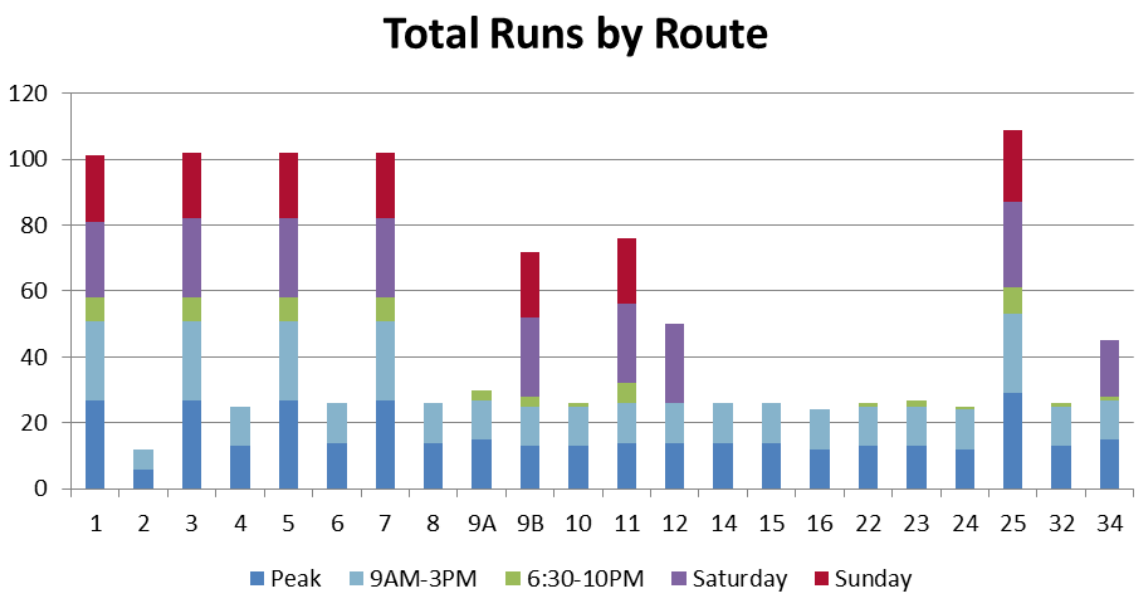
Table 3.10: 2014 Service Information

#	Route Name	Weekday # of Runs				Weekday Service Hours	Saturday Service Hours	Sunday Service Hours
		AM Peak (5-9 AM)	Day (9AM-3PM)	PM Peak (3-6:30)	Evening (6:30-10PM)			
1	Hillside- Hancock Plz	13	24	14	7	5AM-10PM	6AM-7PM	7AM-6PM
2	Centennial Blvd- Garden of the Gods Rd.	3	6	3	0	8AM-5PM		
3	Colorado Avenue	13	24	14	7	5AM-10PM	6AM-7PM	7AM-6PM
4	8th Street	6	12	7	0	6AM-7PM		
5	Boulder- Citadel	13	24	14	7	5AM-10PM	6AM-7PM	7AM-6PM
6	Wasatch- Citadel	7	12	7	0	6AM-7PM		
7	Pikes Peak Avenue	13	24	14	7	5AM-10PM	6AM-7PM	7AM-6PM
8	Cache La Poudre St.	7	12	7	0	6AM-7PM		
9A	Cascade Ave- Voyager Pkwy Transfer Ctr	7	12	8	3	5AM-9PM		
9B	Cascade Ave- UCCS	6	12	7	3	5AM-10PM	6AM-7PM	7AM-6PM
10	Hwy. 115- PPCC	6	12	7	1	6AM-7PM		
11	World Arena- PPCC	7	12	7	6	5AM-10PM	6AM-7PM	7AM-6PM
12	Palmer Park Blvd.	7	12	7	0	6AM-7PM	6AM-7PM	
14	Chestnut- Garden of the Gods Rd.	7	12	7	0	6AM-7PM		
15	Criminal Justice Center- PPCC	7	12	7	0	6AM-7PM		
16	Brookside St.	6	12	6	0	6AM-7PM		
22	Southborough	6	12	7	1	6AM-7PM		
23	Tutt Blvd via Powers Blvd	6	12	7	2	6AM-7PM		
24	Galley Rd.-Peterson AFB	5	12	7	1	6AM-7PM		
25	Academy Blvd.	15	24	14	8	5AM-10PM	6AM-7PM	7AM-6PM
32	Security- Widefield	6	12	7	1	6AM-7PM		
34	Garden of the Gods Rd- Austin Bluffs Pkwy	8	12	7	1	6AM-7PM	6AM-7PM	

Service Frequency

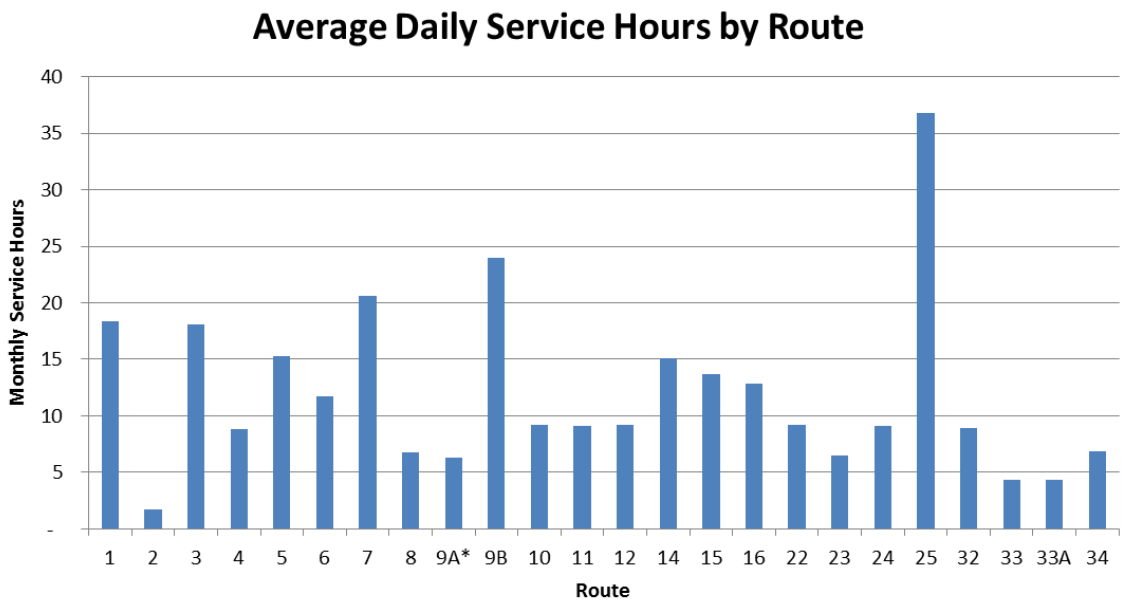
Mountain Metro typically operates at 30- or 60-minute frequencies; service on the weekends (either Saturday or Sunday) operates at 60-minute frequencies. Figure 3.17 presents the bus operations statistics by route.

Figure 3.17: Total Daily Runs by Route



***Data is sourced from scheduling details during summer 2014.**

Figure 3.18: Daily Service Hours by Route from December 2013-May 2014



***9A contains ridership only from UCCS to the Voyager Transfer Center. This data utilizes six months of data (December 2013-May 2014).**

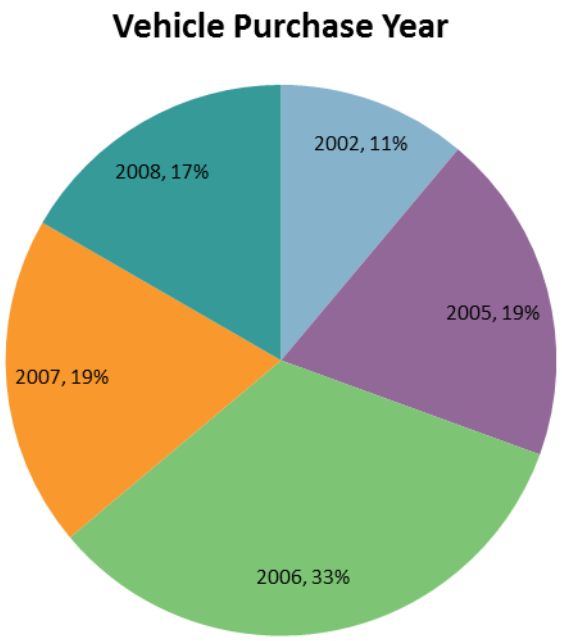
Fleet

Mountain Metro has a total of 36 buses in their fixed route system. Of the 36 buses, 19 are 35' long transit vehicles, 17 are 40' long transit vehicles, and the remaining are either 25' cutaway vehicles or 29' cutaway vehicles. The majority of these transit vehicles are low-floor.

Vehicle Age

The current fleet was purchased at various times during the past 12 years. Figure 3.19 shows the percent of vehicles purchased in each year. One-third of the vehicles were purchased in 2006. Transit follows a minimum 15-year or 700,000 mile replacement schedule and bases replacement priority on vehicle performance.

Figure 3.19: Vehicle Purchase Year



Types of Vehicles

Based on 2013 fleet inventory information, transit operates two types of diesel buses: the Gillig Low Floor and the Gillig Phantom. Only four buses are Gillig Phantoms, and were purchased in 2002.

Seating Capacity

Most of the vehicles in the fleet provide a seating capacity for 32 or 40 people. There are two vehicles that provide seating capacity for 37 people. For total capacity on buses, most buses within the fleet can provide room for 82 or 83 people.

Bus Stop Connectivity

Transit riders rarely live immediately adjacent to a bus stop and must travel to access the system. Many transit riders walk to bus stops, which makes sidewalk connections very important pieces of the transit system.

According to the 2013 on-board survey, most people walk to the bus stop (approximately 80 percent of all riders).

For people to walk to the bus stop, they need to feel safe and have ample infrastructure.

Mountain Metro's fixed-route bus system is structured with a combination of both 'hub and spoke' and 'grid' patterns. The downtown area supports a grid and there are four key hubs:

- Voyager Parkway Transfer Center
- PPCC Transfer Center
- Downtown Transit Terminal
- Citadel Mall Transfer Center

While the Voyager Parkway Transfer Center only serves to transfer between two routes, the other transit centers provide connections among a variety of routes, with the Downtown Transit Terminal and Citadel Mall Transfer Center providing the most transfer opportunities.

Infrastructure

Most transit users must travel to access a bus stop, making connections between bus stops and neighborhoods critical. In general, a variety of factors contribute to improving the walking environment and improving connections between bus stops and areas:[11]

- High-density development
- Mixed-use services to provide options
- Buildings with ground-level businesses and residential above
- Narrow roads
- Short crossing distance at crosswalks
- Street furniture (including benches and trash cans)
- Many crossing opportunities
- On-street parking (to minimize traffic volume)
- Street lighting

Bus stops need to provide adequate infrastructure for a variety of riders—especially if they may have to wait a long time for a transfer or the next bus. The project team identified the following components of a bus stop that benefits users:

[11] *Walkability Improvements*. 2014. Victoria Transport Policy Institute. December 15, 2014. <**http://www.vtpi.org/tdm/tdm92.htm**>

- Bike parking
- Lighting
- Trash cans
- Shelter
- Concrete pad
- Connections to adjacent sidewalks

Current Stops

The Mountain Metro fixed-route system includes more than 1,000 bus stops, 80% of which have either a bench or a bench with shelter. Bus stops that support transfers and high usage are generally prioritized to receive amenities. Table 3.11 has information on the bus stops with and without transfers.

Table 3.11: Bus Stop Amenity Information

	Total Stops	Bench	Shelter	Lighting	Garbage	Telephone	Sign Post
Transfer bus stops	658	309	100	512	132	6	427
		47%	15%	78%	20%	1%	65%
No transfer bus stops	440	191	45	321	59	5	311
		43%	10%	73%	13%	1%	71%

As funding becomes available, Transit will continue to add bus stop amenities in a systematic manner, consistent with the organization's policies. Transit's policy is to perform various impact analyses for all changes to the system, which includes ensuring service, infrastructure, and amenities are distributed equitably in many regards. Transit Service Planning Standards serve as a guide for structure, amenities, and the placement of bus stops as well as outline uniform signage requirements. Table 3.12 presents the general standards for the inclusion of infrastructure at each Transit bus stop, provided site conditions support it and there is adequate right-of-way:

Table 3.12: Bus Stop Amenities

Amenity	Stops for Consideration
Bench	All
Shelter	Serves single route with 40+ daily boardings
Bench or shelter	Serves multiple routes High traffic areas with advertising potential

Bustang Stops

In 2015, the Colorado Department of Transportation (CDOT) plans to begin a new intercity bus service, known as Bustang.

Bustang service in the Colorado Springs area will provide daily connections between the Pikes Peak region and the Denver Metropolitan area.

Four Bustang stops are in the Colorado Springs area:

- I-25/Tejon Park-n-Ride
- Colorado Springs Downtown Transit Terminal (Kiowa Street and Nevada Avenue)
- I-25/Woodmen Park-n-Ride
- I-25/Monument Park-n-Ride

Transit currently serves three out of the four Bustang stops; only the Monument Park-n-Ride is outside the Mountain Metro service area.

Connections to these stops will become increasingly important to deliver Bustang users to their destinations throughout the PPACG area (and beyond).

Bus Stop Standards

Transit Service Planning Standards outline uniform signage requirements as well as guidelines for structure, amenities, and the placement of bus stops. The spacing between stops is generally based on the level of urban development. In more urban areas, bus stops are closer together because a higher population density is more likely to generate supporting ridership.

Table 3.13 describes the location categories and the corresponding spacing requirements for bus stops.

Table 3.13: Bus Stop Spacing Standards

Location Category	Spacing between Stops
Urban	1,000 feet
Urban/suburban mix	1,250 feet
Suburban	1,500 feet
Suburban/rural mix	0.5 mile
Rural	1 mile

Popular Stops

Figure 3.20 and Figure 3.21 shows the current geographic concentrations of both boardings and alightings. A number of key locations include destinations for shopping, education, human services, and downtown employment centers.

The popular boarding locations are the following areas:

- Citadel Mall
- Hancock Plaza (Hancock & Academy)
- West Terrance Apartments (Chelton/US 24/East Fountain)
- PPCC
- Broadmoor Towne Center Area
- Bear Creek (west of downtown)
- Downtown
- West Colorado Ave (just west of downtown)
- Manitou Springs
- Oliver Wendell Holmes Middle School (at West Fillmore and Mesa/also near Palmer Mesa and Mesa Valley Trail)
- El Paso County Citizens Service Center

- University of Colorado - Colorado Springs (UCCS)
- Marketplace at Austin Bluffs (Austin Bluffs and Academy)
- Chapel Hills Mall

Popular alighting locations are the following areas:

- Citadel Mall
- Hancock Plaza (Hancock & Academy)
- PPCC
- Broadmoor Towne Center Area
- Downtown
- West Colorado Ave (just west of downtown)
- Manitou Springs
- El Paso County Citizens Service Center
- UCCS
- Marketplace at Austin Bluffs (Austin Bluffs and Academy)
- Chapel Hills Mall

Figure 3.20: 2013 Yearly Boardings per Stop

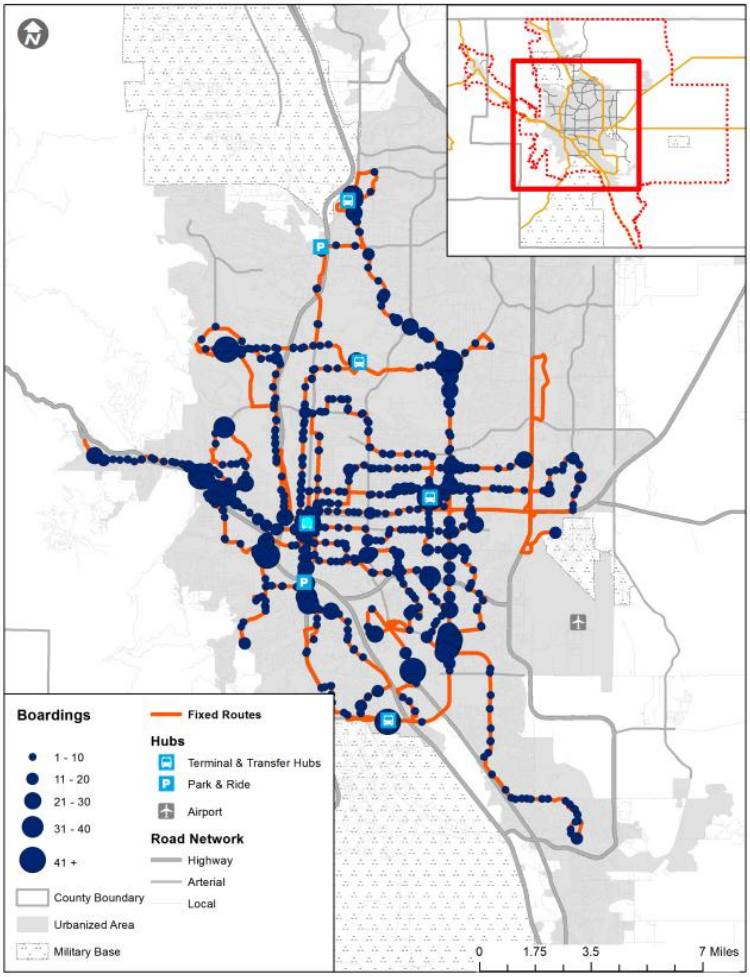
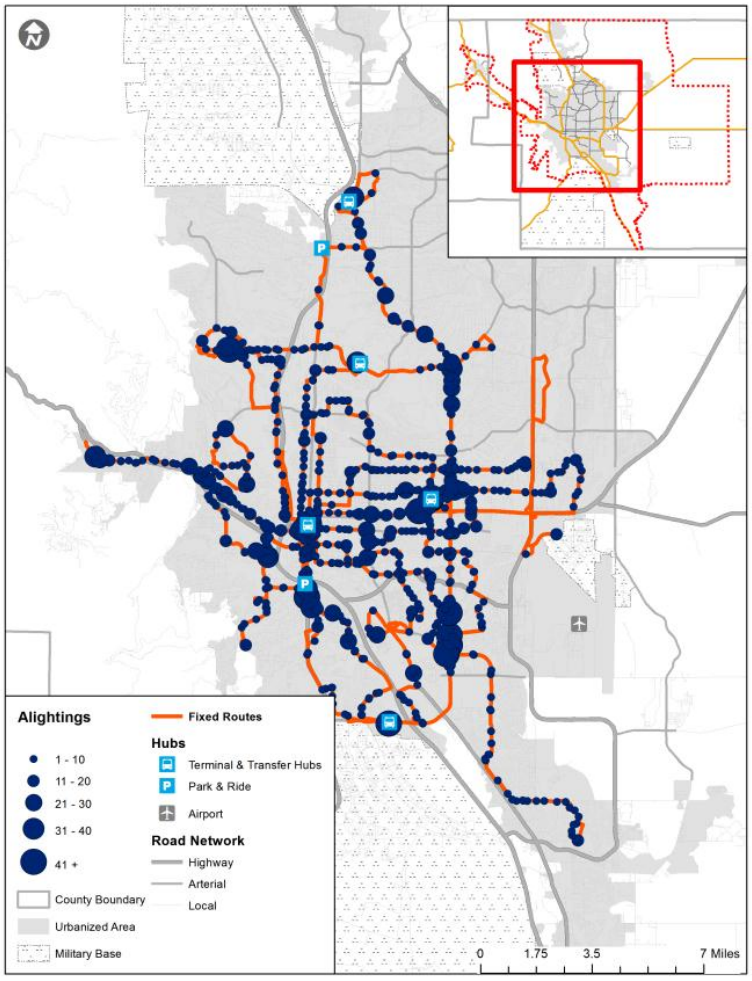


Figure 3.21: 2013 Yearly Alightings per Stop



Summary

Mountain Metro provides transit service to approximately 188 square miles but frequency and span of service are limited. Most routes run 30- or 60-minute frequencies, and evening and weekend services are limited. According to the 2013 onboard survey, Mountain Metro is a lifeline service, providing service primarily for those that have few other mobility choices. Transit recognizes the need for improvements to bus stop amenities, services, and connectivity and is working to achieve this with limited budgets.

Funding

This section provides basic information on the 2014 Transit budget for both revenues and expenses. This information is presented to provide context for the provision of transit described in this chapter. Additional details on funding sources and projections are provided in Chapter 6.

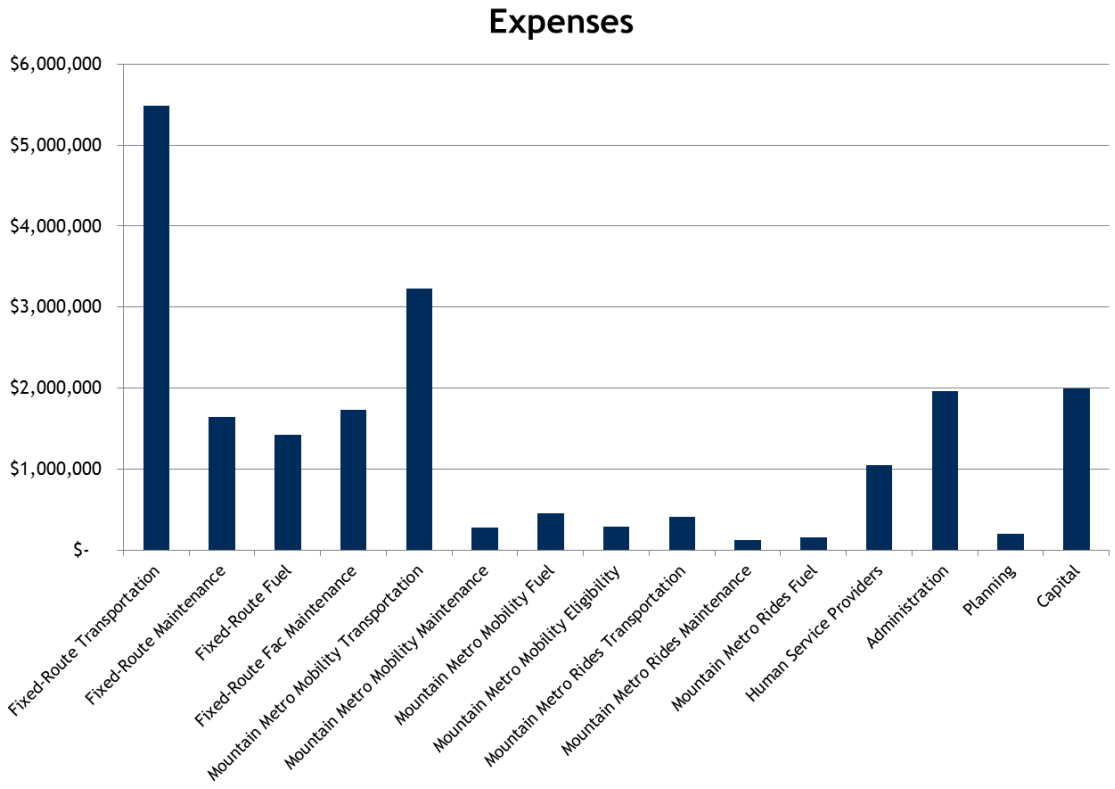
Expenditures

For 2014, the total expenses totaled approximately $20.5 million.

The majority of the Transit budget is operational.

Approximately $2 million was spent on capital improvements. Figure 3.22 presents the annual operating and capital expenditures.

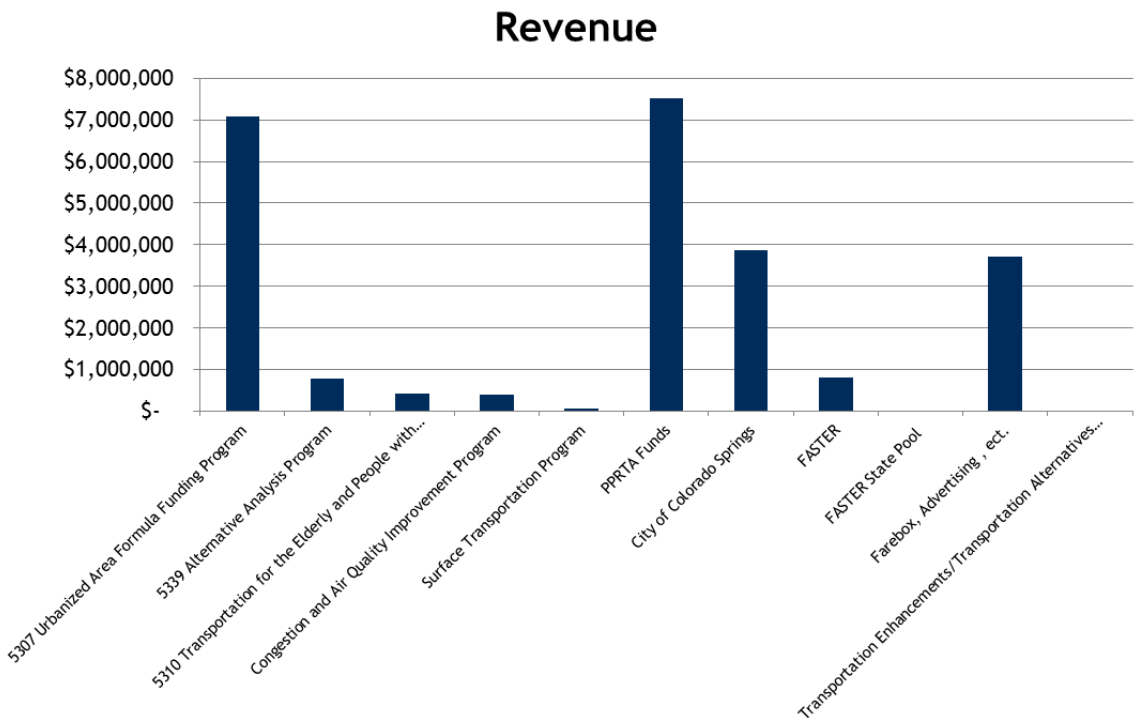
Figure 3.22: Operating and Capital Expenses



Revenue

The two most-significant sources of funding for Transit are the FTA 5307 formula grant and PPRTA tax revenues. The City of Colorado Springs and farebox and advertising revenue also contribute to a significant amount of overall revenue for the 2014 budget year. Figure 3.23 graphically presents annual revenue information.

Figure 3.23: Transit Annual Revenues



Transit Ridership

Looking at the 2013 annual ridership, the weekday midday period has the highest ridership. The two traditional peak periods (during the morning rush hour from 5-9AM and evening rush period from 3-6:30PM) are generally equal at about 600,000 boardings each over the entire year. Evening, Saturday and Sunday service ridership is much lower, at below 200,000 riders over the course of the year.

Weekday Ridership

The vast majority of ridership occurs middays during the week. Figure 3.24 shows the total number of trips based on time period.

Very few people use the service during the evening hours, presumably since most service ends at approximately 7 PM.

During weekday service, Route 25 provides the most service at more than 1,000 hours a month. All other routes provide substantially fewer service hours, ranging from approximately 50 hours to approximately 600 hours per month. Route 25 also has the most riders, averaging close to 30,000 riders every month.

Figure 3.25 shows the total number of riders per service hour based on routes—a better performance measure than absolute numbers. A number of routes have more than 25 trips logged per service hour, including Routes 5, 11, 14, 7, 10, 3, 25,and 1. Although these routes do not

provide the same service, they do perform at about the same level, with Routes 5 and 11 performing at the highest, more than 40 trips per hour. Many of the routes that provide service during the weeknights and on the weekends likely do not have as high performance since in general, less people ride at night and over the weekends.

Figure 3.24: 2013 Annual Ridership by Time of Day

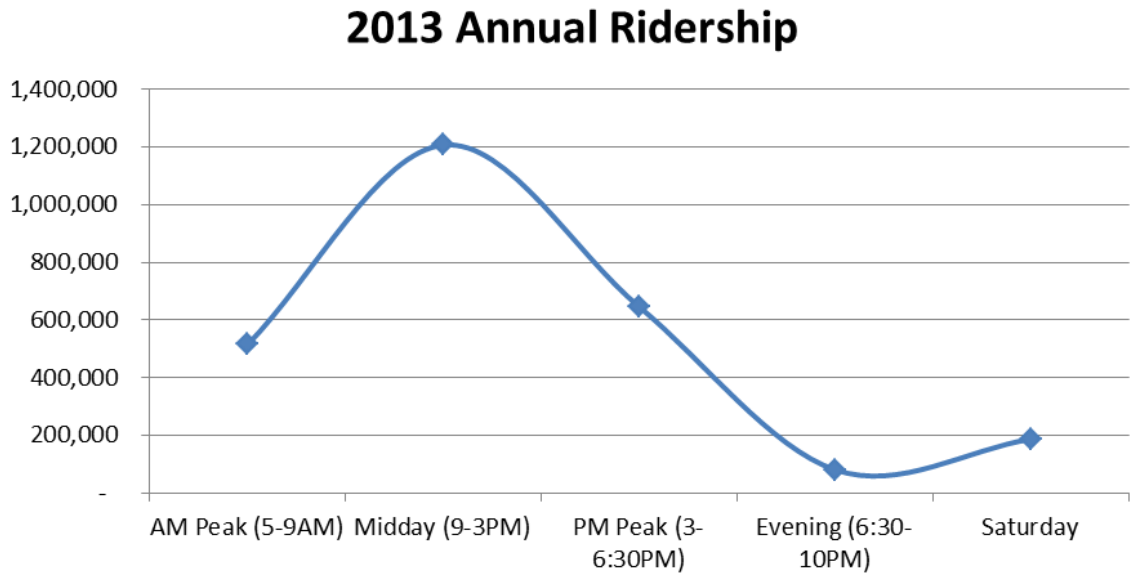
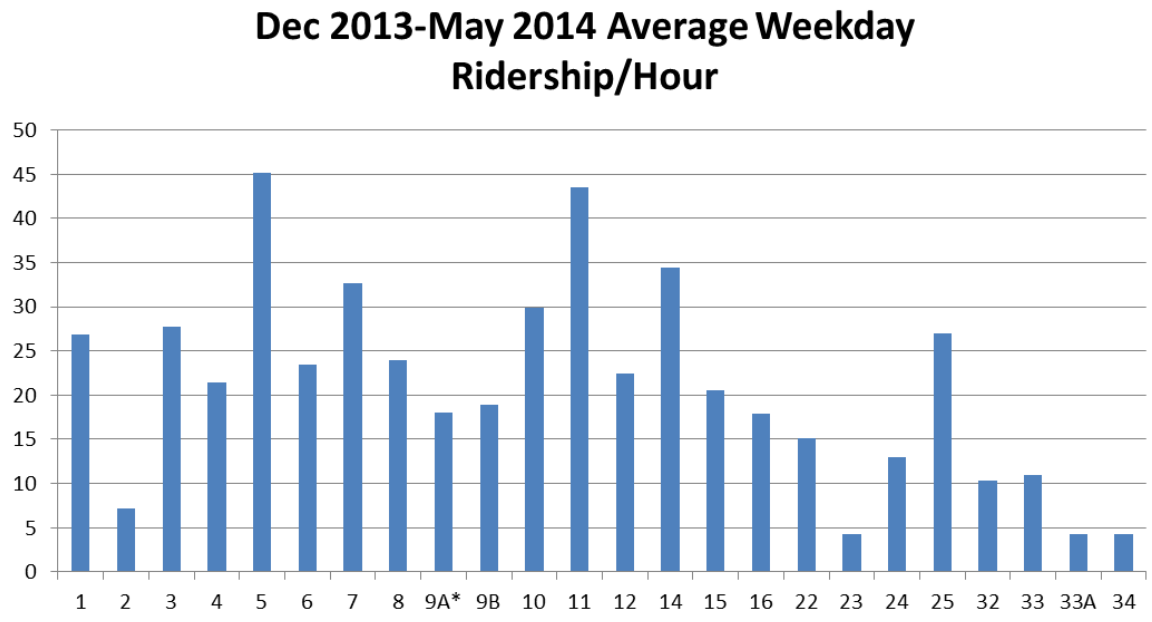
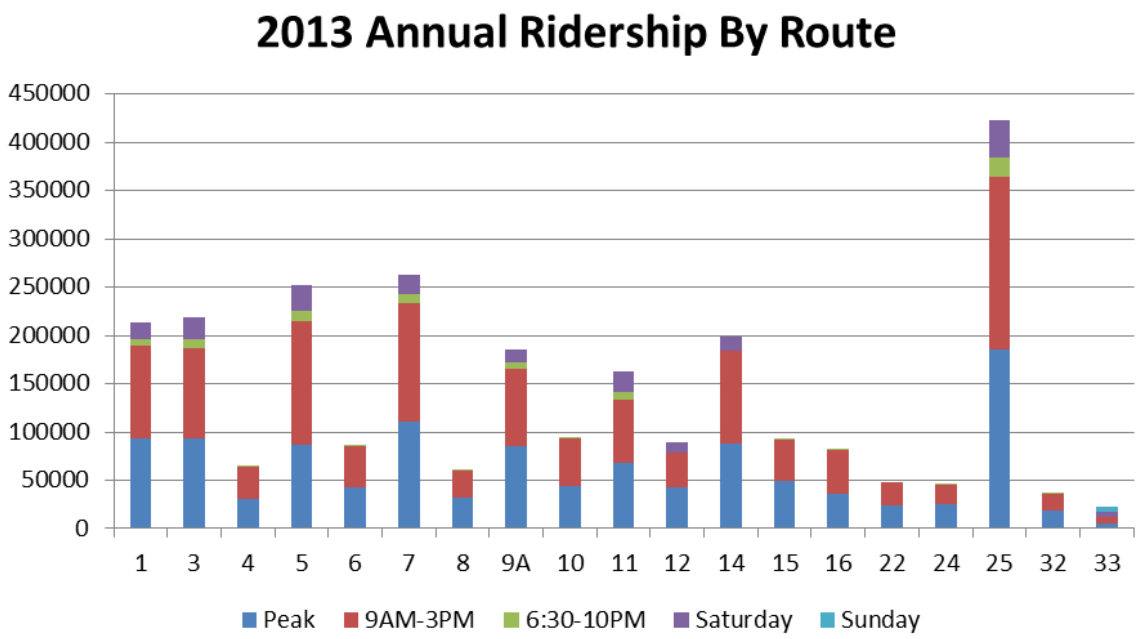


Figure 3.25: Average Weekday Ridership/Service Hour



Error! Not a valid bookmark self-reference. shows 2013 annual ridership by route and Figure 3.27 shows average monthly ridership.

Figure 3.26: 2013 Annual Ridership by Route



Sunday service is only provided for three quarters of the year.

Weekday Peak Period Ridership

Based on annual ridership data from 2013, ridership during PM peak hours (between 6:30 and 10:00 PM) is slightly higher than AM peak hours (between 6:00 and 9:00 AM), however, even when the two timeframes are combined, they do not match the midday peak.

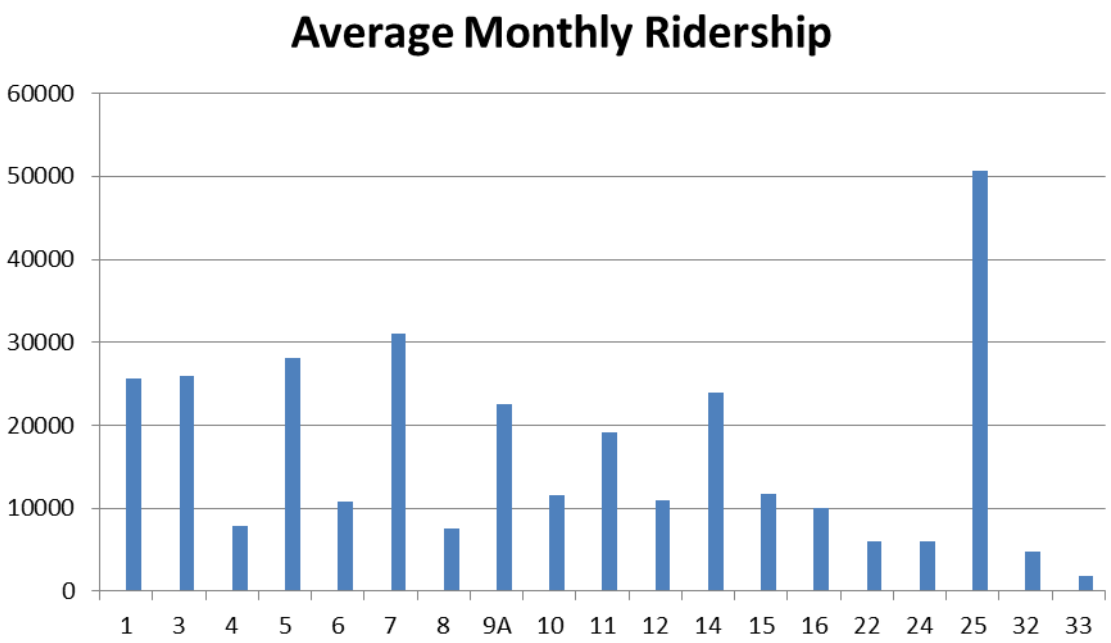
Weekend Ridership

Weekend ridership constitutes a small proportion of overall ridership for the entire system. The 2013 annual data shows that there was very little ridership on Sunday since Sunday service was not provided from January – March 2013.

Yearly Ridership

Based on absolute numbers of total riders during 2013, Route 25 experiences the highest number of ridership, followed by Routes 7, 5, 3, 1, 14, and 9.

Figure 3.27: 2013 Average Monthly Ridership



Summary

Daily ridership data shows the bulk of ridership occurs during the midday hours rather than during rush-hour timeframes in the morning and afternoon, which is the most common pattern.

While travel volumes are usually greater in the mornings and afternoons, Mountain Metro ridership peaks midday

Many factors could contribute to this outcome of greater ridership during the midday period instead of during the traditional morning and evening rush hour periods related to the actual service of a particular route, including that many riders are currently transit dependent.

Most service is provided during weekdays, either during the day or peak times. Very little service is provided past about 6 PM or 7 PM. Only six routes provide service after 7 PM and then only during the week. Overall, five routes provide more than 100 runs of service over the course of the entire week (Routes 1, 3, 5, 7, and 25).

User Impressions

The project team examined a variety of sources of information to summarize the general impressions of the system from a user's perspective. This included reviewing the results of recent Mountain Metro rider surveys as well as input received through stakeholder outreach conducted as part of this plan's development. In general, users were appreciative of the service provided by Transit.

In general, users found the existing system functioning as well as it can, considering the financial constraints and cutbacks experienced in recent years.

However, services do not currently appear to meet the needs of the community and much of the input received highlighted the need for improved frequencies on current routes at a minimum.

Stakeholder Group

Although users recognized funding limitations, they highlighted the low frequency of existing bus services, many times 30 to 60 minutes between buses. Additionally, users commented on the long wait times typically experienced between bus transfers. Users also noted the limited service span does not provide enough coverage during weekday evenings and weekend days. In fact, many routes (about 60 percent of all routes) do not provide any service on the weekend days.

Throughout the Transit Plan public engagement process, which included two public meetings and corresponding online questionnaires, the Steering Committee identified a number of positive and negative aspects about the current system through a strengths, weaknesses, opportunities and challenges (SWOC) exercise. Table 3.14 lists those aspects. More information on the processes used can be found in the Stakeholder Involvement section 4.

Table 3.14: SWOC Exercise with Steering Committee

Strengths	Weaknesses	Opportunities	Challenges
Doing our best with limited funds	Limited frequencies and service hours	Expand service hours/frequencies	Finding stable funding
Resilient, despite service cuts	Lack of stable funding source and political prioritization	Coordination specialized services	Keeping up with demand (aging population and millennials)
Support of regional transit	Difficult transfers and connectivity	Encourage high-density land uses	Responding to the changing political climate
Strong base for coordination		Focus on military needs	Providing service with low density and urban sprawl
Specialized service is flexible and responsive		Consider current routes	
Passionate supporters		Integrate fixed-route / specialized	

Rider Survey

In May of 2013, Transit conducted an on-board survey and collected more than 1,000 responses at a rate of 30 percent. In addition to boarding and alighting information, the surveys collected both demographic and trip information, including those listed in Table 3.15.

Table 3.15: Rider Survey Information

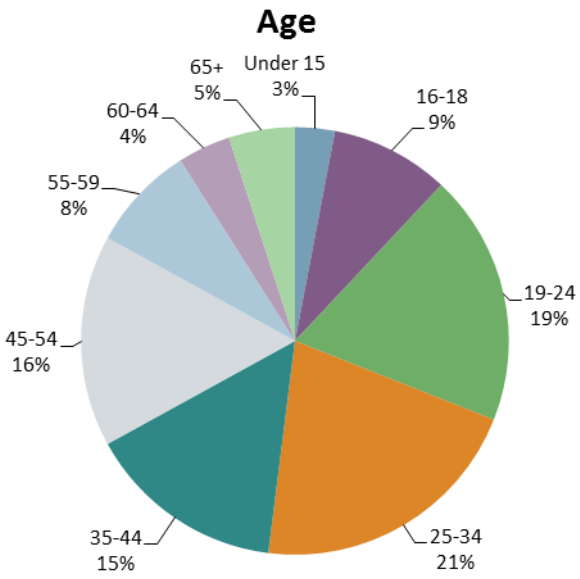
Demographic Information	Trip Information
Primary language	Purpose for riding

Demographic Information	Trip Information
Age and gender	Reason for riding
Annual household income	Trip purpose and reasons for riding
Vehicle ownership and licensed driver	Number of transfers
Occupation	Transfer patterns
Ethnicity	Coming from and going to
Rider's typical source for transit information	Blocks walked/to/from the bus

Age

While survey respondents generally span the entire age spectrum, over half of Mountain Metro riders indicated they were younger than 35. Only three percent of respondents were not old enough to drive a motor vehicle. Figure 3.28 presents rider age information.

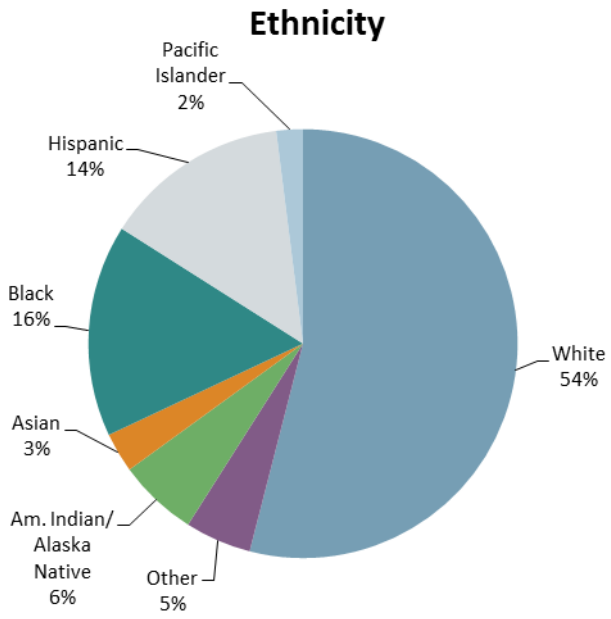
Figure 3.28: Age Rider Information



Ethnicity

While white survey respondents comprised slightly more than half of all survey respondents, 46 percent of survey respondents were of minority ethnicities. Black and Hispanic ethnicities make up the majority of the non-white respondents at 16 percent and 14 percent, respectively. Figure 3.29 presents rider ethnicity information.

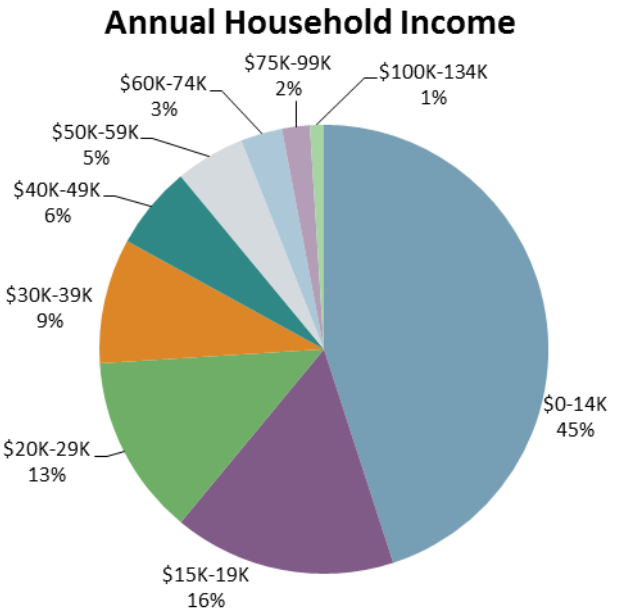
Figure 3.29: Ethnicity Rider Information



Annual Household Income

In line with national demographics of transit riders, the respondents from the survey mostly fell in the income category of $14,000 and less. Nearly half of all respondents live in a household of less than $15,000 of annual income, while none of the respondents reported an annual income of greater than $150,000. The majority (83 percent) lived in households with an annual income of less than $40,000. Figure 3.30 presents rider household income information.

Figure 3.30: Annual Household Income Rider Information

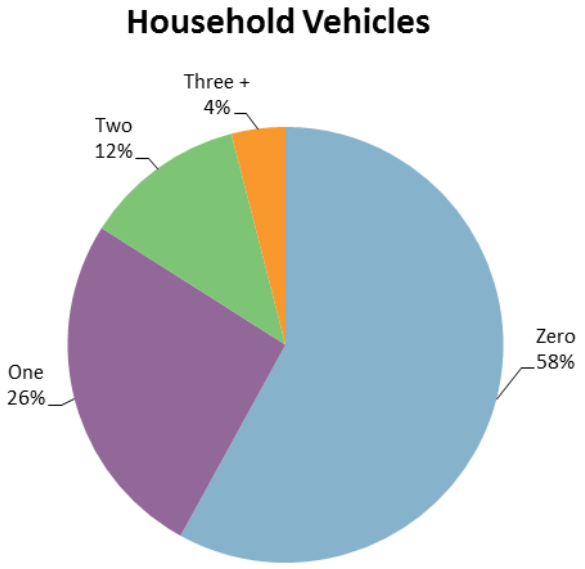


Household Vehicles

More than half of the survey respondents lived in households with no vehicle. 26 percent of survey responders live in a household with one vehicle, and only 16 percent reported two or more vehicles in their households

Figure 3.31 presents rider household vehicle information.

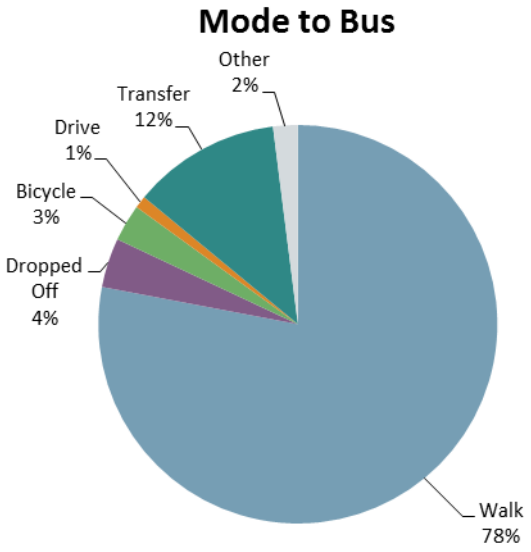
Figure 3.31: Household Vehicles Rider Information



Mode to Bus

The vast majority of survey respondents (78 percent) arrived at their transit stop by walking. The next most popular way to arrive was by transfer (12 percent). Only 4 percent were dropped off by someone else, and 3 percent arrived by bicycle. Figure 3.32 presents rider information on mode access to transit.

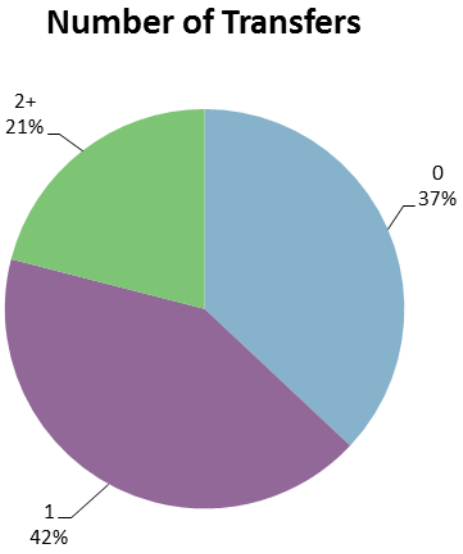
Figure 3.32: Mode to Bus Rider Information



Number of Transfers

Most commonly, a passenger requires at least one transfer to complete their journey. A single transfer was the most popular number of transfers among survey respondents at 42 percent, and 21 percent made two or more transfers. 37 percent of the respondents did not require a transfer. Figure 3.33 provides graphic information on bus transfers.

Figure 3.33: Number of Transfers Rider Information



Reason for Riding

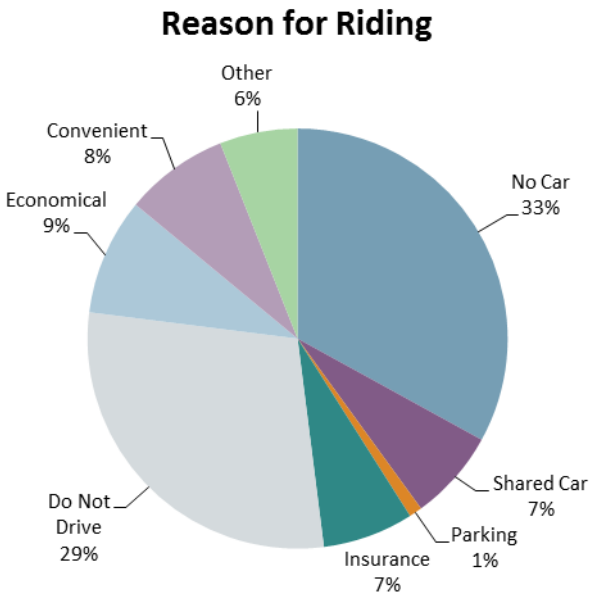
Approximately 76 percent of survey respondents reported that they ride because of low vehicle availability. While 33 percent of respondents did not have a car, 29 percent of respondents did not drive. Another seven percent reported they had car trouble or no insurance. The final seven

percent noted that someone else uses the car. No one claimed the primary reason for riding based on bad traffic and only one percent claimed parking as a problem.

A total of 17 percent of survey respondents primarily rode the bus due to the bus being economical (nine percent) and convenient (eight percent).

A total of six percent of others cited other reasons. Figure 3.34 presents information on individual's reasons for riding.

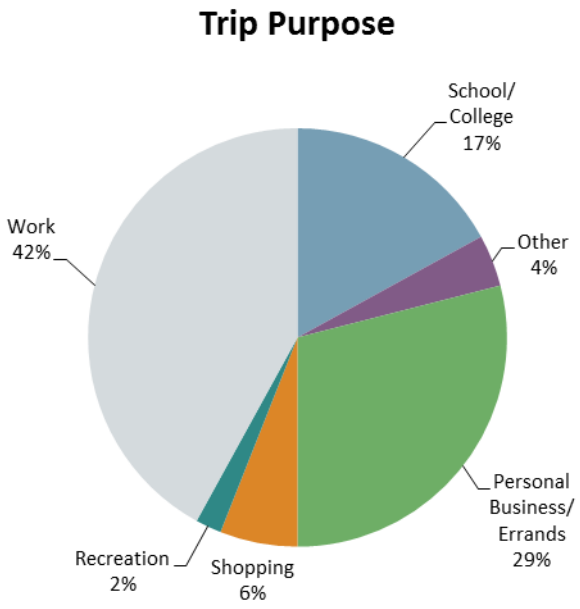
Figure 3.34: Reason for Riding Rider Information



Trip Purpose

The majority of respondents used transit for work (42 percent). The second most common reason for riding transit was personal business or errands (29 percent). School or college made up the third-most common trip purpose at 17 percent. The remaining respondents traveled to shopping (six percent), other (four percent) and recreation (two percent). Figure 3.35 presents information on trip purpose.

Figure 3.35: Trip Purpose Rider Information



Summary

The stakeholders identified a number of factors that likely affect the makeup of the passengers who use Mountain Metro. These rider characteristics are reflected in the respondents' surveys. Overall, the stakeholders identify a number of problems that would make the system more attractive to more people including frequency, ease of access, and hours of service.

Approximately 29 percent of respondents do not drive and more than half of all respondents do not have a household vehicle available.

Most of the respondents who completed the 2013 Onboard Survey indicated that they had little to no other choice but to use transit for transportation.

Other Service Providers

Transit provides a number of other mobility services within the community in addition to the fixed-route bus service, including Metro Mobility and Metro Rides. Additionally, the City of Fountain (south of Colorado Springs) provides its own bus service that connects with Mountain Metro services at the PPCC Transfer Center. These services are further described below.

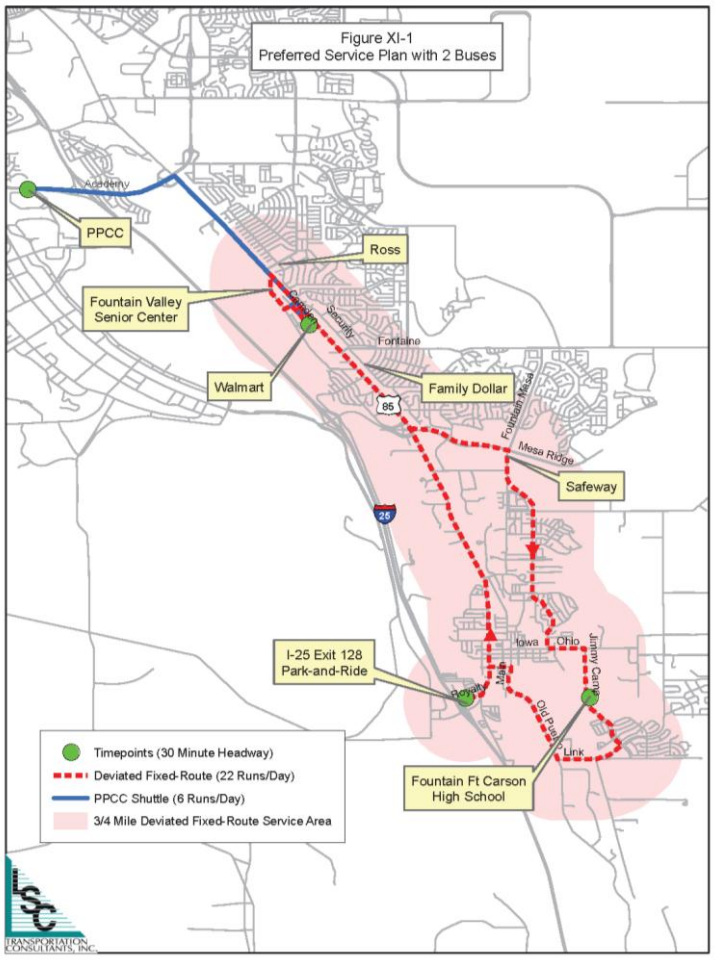
Fountain Deviated Fixed-Route Service

Fountain Municipal Transit provides service from PPCC to the Wal-Mart in Fountain. This service operates as a deviated route to the I-25 Exit 128 Park-n-Ride as well as to Fountain-Fort Carson High School. In the deviated route section, passengers may request to be picked up or dropped off within three-quarters of a mile from the regular route alignment for a fare premium, as shown in the red dashed line in Figure 3.36.

The service operates from about 5 AM – 7 PM, Monday-Friday with the exception of holidays. Passengers (regular fare with 1 deviation) can pay for single rides for $4.50 or a monthly pass for $54. Discounted fares are provided for children 6-11 (under 5 are free), people using Medicare, people with disabilities, seniors and students. There is flexibility in paying the exact fare in cash or purchasing tickets in advance from the Fountain Valley Senior Center or Fountain City Hall.[12]

The City of Fountain is outside the PPRTA area and provides public transportation funded through a Fountain-only Rural Transportation Authority passed from voter approval.

Figure 3.36: Map of Fountain Deviated Service[13]



[12] City of Fountain. Deviated Fixed Route. July 16, 2014 <**http://www.fountaincolorado.org/egov/documents/1345843686_586334.pdf**>

[13] Graphic – LSC Transportation Consultants, *Fountain Transit Model Feasibility Study, Final Report,* Web. April 1, 2015 <**http://www.fountaincolorado.org/egov/documents/1330995975_809631.pdf**>

Figure 3.37 shows monthly ridership levels from mid-2013 to mid-2014. Monthly ridership peaked at close to 2,500, while the lowest monthly ridership figure was just less than 1,500. Average monthly ridership was approximately 1,800. Figure 3.38 shows the number of monthly deviations. While the deviations remained relatively low from July 2013 until February 2014, the service has since experienced an increase in requested deviations from riders.

Figure 3.37: Fountain Monthly Riders

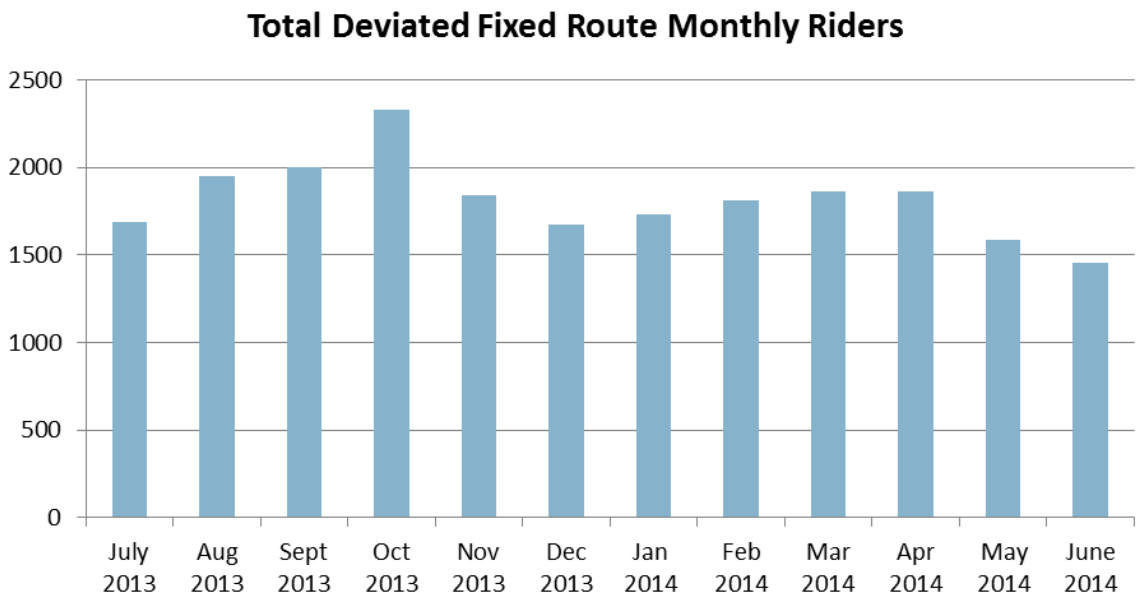
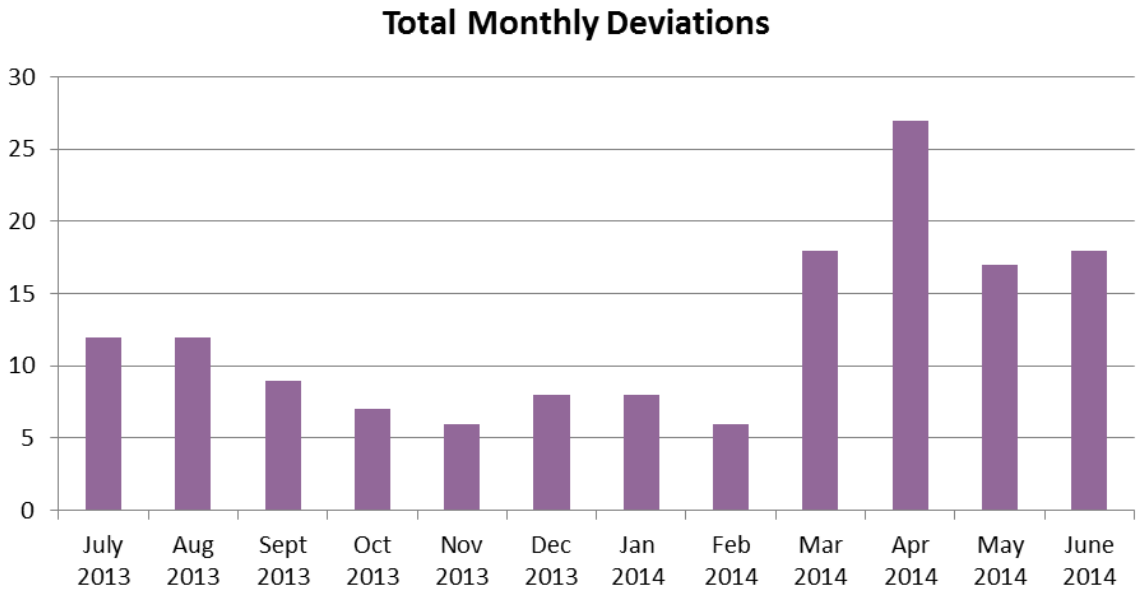


Figure 3.38: Fountain Monthly Deviations



Metro Mobility

Metro Mobility is a federally-mandated complementary ADA paratransit service, which provides demand-response transportation for individuals that have a disability that prevents them from using the fixed-route bus system. This service is provided within three-quarters of a mile of all the fixed-route service.

The three main levels of eligibility include the following:

1. Individuals unable to navigate the fixed-route system
2. Individuals who use a wheelchair or other boarding assistance device that cannot access bus stops
3. Individuals with a specific impairment-related condition which prevents them from traveling to or from bus stops[14]

Metro Mobility coordinates with other paratransit providers to provide extensive mobility for those that cannot navigate the fixed route system. Metro Mobility also provides travel training for individuals that may be able to use the fixed route services, if they better understood the system and how it can accommodate their needs. Shifting clients (who are able) from paratransit service to fixed route services can reduce costs and provide efficient mobility for clients. A separate plan is being developed in parallel to this Transit Plan, detailing the future growth and development of the specialized transportation system within the PPACG area. This parallel plan (the 2040 Regional Transportation Plan – Specialized Transportation) addresses the future provision of paratransit service and coordination by Metro Mobility and all of the other providers within the PPACG area.

Metro Rides

Transit provides other services to encourage multimodal transportation, including carpool matching, vanpools, schoolpool matching and resources to help bicyclists combine their trips with transit. Racks are provided on the buses as well as bicycle lockers at key Park-n-Ride locations.[15]

Metro Rides offers alternative transportation options to residents of the PPACG area. The program is designed to reduce congestion and pollution by encouraging people to commute by carpool, vanpool, bicycling or walking.[9]

Policy & Plan Review

It is critical to review and incorporate relevant elements of past transportation and land-use planning efforts to ensure the direction set by stakeholders and decision makers is followed. To understand past planning directions, the project team reviewed current policies and plans in place related to fixed-route and specialized transportation. Various plans were reviewed and the key

[14] *Eligibility Requirements and Application.* City of Colorado Springs. Web. November 19, 2014 <**http://www.springsgov.com/Page.aspx?navid=1977**>

[15] *Mountain Metro Rides*. 2014. City of Colorado Springs. Web. November 19, 2014. <**http://transit.coloradosprings.gov/transportation/public-transportation/alternative-transportation/mountain-metro-rides**>

themes or findings were summarized for each. Table 3.16 presents the policies and plans reviewed, as well as the key themes or findings relevant to the current transit planning effort.

Table 3.16: Plan and Policy Review

Plan	Key Theme/Findings
CCS: Intermodal Transportation Plan (ITP) – Adopted in 2001 The plan was comprised of a collection of plans (Major Thoroughfare Plan, Truck Route Plan, Transit Plan, and Bicycle Plan)[16]	Supported new services (express buses, rapid transit systems, Eco-Pass program) Supported improved connectivity (grid bus system, interconnection with other cities, Park-n-Ride locations)
CCS: The Future of Regional Transit (FoRT) Study – 2011 The FoRT Study provided a regional vision for transit The plan recommended a governance structure to administer transit and methods to provide a sustainable funding plan	Promoted new governance model for transit Supported new and enhanced services (build on service after meeting 2008 levels) Promoted regional cooperation
CCS: Transit Solutions Team Reports Commissioned by the Mayor, this plan included a series of team reviews, examining methods to improve transit efficiencies and reduce costs	Promoted coordination and competition among specialized transportation providers Promoted increased fixed-route frequencies and service hours
CCS: Streetcar Feasibility Study – 2010 Examined a variety of potential corridors for future streetcar development based on key transportation and land use characteristics	Determines a streetcar system is feasible in Colorado Springs Promoted improved transportation Promoted benefits of streetcars to development and revitalization
CCS: Rapid Transit Feasibility Study and System Master Plan – 2004 Plan defined four rapid transit corridors providing critical connections within the City of Colorado Springs	Supported new and improved local bus services Supported enhanced, experimental express bus service on one or two corridors[17]
CCS: Pikes Peak Regional Park and Ride Study– 2003 This study examined the top-performing Park-n-Rides and recommended areas for future Park-n-Rides	Supported broader transit connectivity within the region development of Park-n-Ride locations: • Black Forest Road/Woodmen Road/Templeton Gap Road • Powers Boulevard and Barnes Road • I-25 and Northgate Road • SH 16 and I-25 • US 24 and Meridian / Eastern Woodmen Road Corridor (Falcon)[18] • US 24 west and 31st Street

[16] *Intermodal Transportation Plan.* 2011. City of Colorado Springs. Web. October 2, 2014. <**https://www.springsgov.com/Page.aspx?NavID=4131**>

[17] Parsons. *Rapid Transit Feasibility Study and System Master Plan.* 2004. Report. October 7, 2014. <**http://www.springsgov.com/units/transit/Planning/Rapid_Transit_Corridor_Final_Report_2004.pdf**>

Plan	Key Theme/Findings
CDOT: Interregional Connectivity Study (ICS) – 2014 Study examined high speed transit (either high speed rail or high speed Maglev) connections in Colorado	Proposed a high speed rail connection between DIA and north Colorado Springs[19] Supported regional connectivity to the proposed high speed rail
CDOT: Statewide Transit Survey of Older Adults and Adults with Disabilities – 2014 This survey examined the thoughts of seniors and persons with disabilities on transit dependency, barriers to transit, and cost	Supported improvements to transportation information/referral services Promoted lower fares Promoted improving access and accessibility to transit
CDOT: Statewide Transit Plan –2014 Promoted a state-wide transit system, including service to Denver from Colorado Springs	Supported statewide coordination and partnerships Promoted transit expansion statewide (specifically new services between Colorado Springs and Denver)
PPACG: 2035 Moving Forward Update – 2012 Basis for the current planning process This plan examined all aspects of transit and transportation for the region through 2035	Set the transportation goals and priorities for the Pikes Peak region through 2035 Promoted development policies that support transit Encouraged sustainable development of transit services Supported the connections between land use, development, and transportation
PPACG: Regional Sustainability Plan – 2012 Plan examined long-term sustainability measures for transportation and development within the region	Encouraged a built environment with an integrated transportation system Supported a multi-modal transportation system Supported higher-density neighborhoods
PPACG: Pikes Peak Rural Transportation Authority – 2004 to present Set out the policies and procedures for implementing the PPRTA sales tax measure approved in 2004	Provided key funding for core transit and mobility services within the region Critical to the ongoing provision and expansion of transit
PPACG: Fort Carson Regional Growth Plan – 2013 Sets a structure for future growth and changing conditions for Fort Carson based on its core mission	Supports congestion relief through alternative transportation modes Supports improved mobility on post Supports improved connectivity between the post and various points around the region
PPACG: Transportation Improvement Program (TIP) – 2013 thru 2018 Plan sets the financial plan for regional transportation improvements	Support improved transit infrastructure and operations Details funding mechanisms for priority transit and mobility projects throughout the region

[18]David Evans and Associates. *Pikes Peak Regional Park and Ride Plan.* 2003. Report. City of Colorado Springs, El Paso County & PPACG. October 6, 2014. <**http://www.springsgov.com/units/transit/Planning/FINAL_P-N-R_REPORT_2003.pdf>**

[19]*Interregional Connectivity Study Executive Summary.* 2014. Colorado Department of Transportation. Report. October 7, 2014. <**http://www.coloradodot.info/projects/ICS/ics-draft-report-january-2014/ics-executive-summary-2-10-14.pdf/view>**

Plan	Key Theme/Findings
PPACG: Status of Older Adults in Pikes Peak Region – 2004	Documents limited transportation access for seniors in the region
Plan examines the importance of alternative mobility options for seniors	Supports improved mobility and enhanced transit options

Peer Cities Review

In an effort to identify how similar communities approach the provision of transit, funding, sustainability, and the expansion of services, the project team examined a range of peer cities. The review of peer cities examined fixed route and specialized transit systems. Peer cities were selected based on similar characteristics to that of the Mountain Metro services, the City of Colorado Springs, and the surrounding urbanized area. Although no two cities are the same, the project team used the following characteristics to select peer systems:

- Population
- Service area
- Service area density

Upon review of urbanized areas, the project team selected the following five urbanized areas and their corresponding transit agency:

- Ann Arbor, Michigan – Ann Arbor Transportation Authority (AATA)
- Grand Rapids, Michigan – Interurban Transit Partnership (The Rapid)
- Madison, Wisconsin – Metro Transit System
- Minneapolis/St Paul, Minnesota – Metro Transit
- Spokane, Washington – Spokane Transit Authority (STA)

All of these transit systems have relatively low operating costs and high ridership, given the demographic characteristics of the area. The project team examined a variety of factors related to these peer systems including cost and ridership. The performance of each system was compared to Mountain Metro. This comparison was based on vehicle revenue hour, unlinked passenger trips, and vehicle revenue miles. From these comparisons, the peer review further documents potential successful actions that Transit may choose to emulate through this plan.

This section discusses the above transit systems in two manners:

- Operational comparisons in standard monitoring measures
- Innovative measures the systems take that result in running successful operations

Operational Comparisons

Table 3.17: Peer Transit

Urbanized Area	Transit Agency	2010 Population[20]	Urbanized Area[21](mi^2)	2010 Urbanized Area Density (per mi^2)	Fare
Colorado Springs	Mountain Metro	561,000	188	2,979	$1.75
Ann Arbor, MI	AATA	307,000	81	3,790	$1.50
Grand Rapids, MI	The Rapid	570,000	185	3,081	$1.50
Madison, WI	Metro Transit System	402,000	72	5,583	$2.00
Minneapolis/St. Paul, MN	Metro Transit	2,651,000	607	4,367	$1.75-$3.00
Spokane, WA	STA	388,000	248	1,565	$1.50

Cost & Ridership Comparison

The National Transit Database (NTD) collects data from transit agencies across the country, making apples-to-apples comparisons possible. The project team used a variety of these metrics to compare Mountain Metro to the peer-city transit systems, including:

- Costs:
  - Operating budget
  - Fare revenue
  - Operating expense per vehicle revenue hour
  - Operating costs per unlinked passenger trip
- Ridership-related:
  - Ridership (annual unlinked passenger trips)
  - Passenger trips per mile (unlinked passenger trips per vehicle revenue mile)
  - Passenger trips per operating hour (unlinked passenger trips per vehicle revenue hour)

Although all of the peer agencies have higher budgets for their systems, there are measures to normalize ridership and costs for comparison purposes.

The Minneapolis/St. Paul system is the largest system among the peer systems.

The budget for Minneapolis' Metro Transit fixed-route bus system is approximately $250 million and the fare revenue at approximately $80 million. This system also boasts the highest ridership numbers. Ann Arbor is the smallest system included among the peer systems with an annual

[20] *US Census Bureau*; generated by Hannah Polow. American FactFinder. September 24, 2014. <**http://factfinder2.census.gov**>

[21] *Transit Agency Profiles.* 2012. National Transit Database. September 23, 2014. <**http://www.ntdprogram.gov/ntdprogram/profiles.htm**>

operating budget of approximately $22 million and drawing $4.6 million in fare revenue and 6.3 million trips. Table 3.18 presents the Mountain Metro and peer cities data from the 2012 NTD reports.

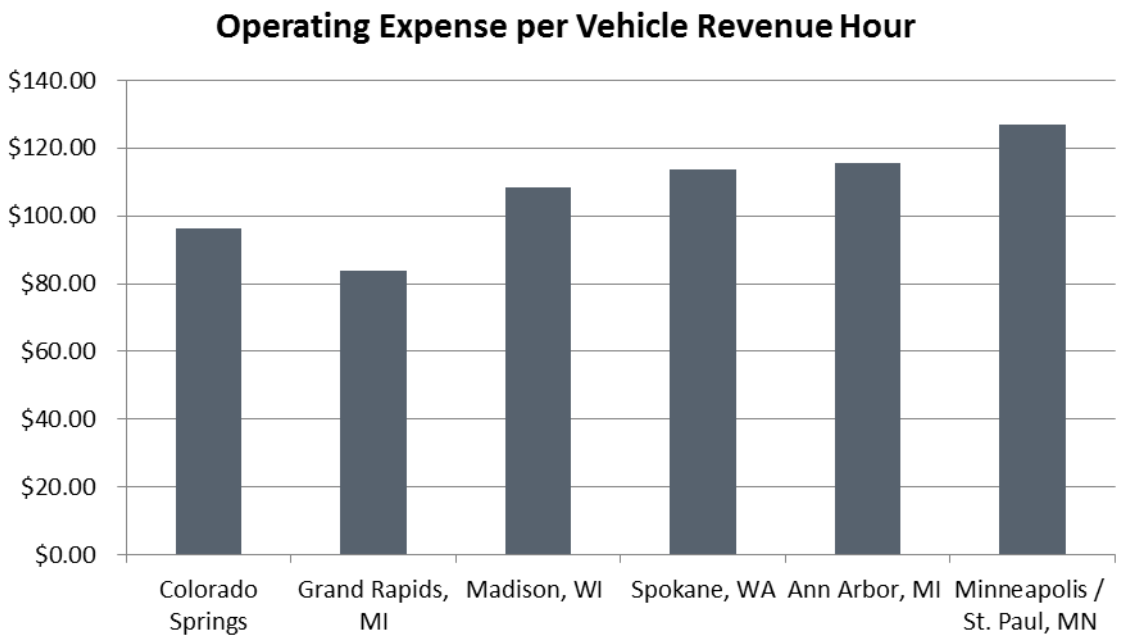
Table 3.18: Peer Transit – Cost and Ridership

Urbanized Area	Total Fixed Operating Budget (millions)	Bus Fixed Route Operating Budget (millions)	Fare Revenue	Annual Unlinked Trips (millions)	Operating Expense per Vehicle Revenue Hour	Operating Expense per Unlinked Passenger Trip	Unlinked Passenger Trips per Vehicle Revenue Mile	Unlinked Passenger Trips per Vehicle Revenue Hour
Colorado Springs	10.9	10.9	2.8	2.6	$96.46	$4.21	1.40	22.93
Ann Arbor, MI	23.4	22.3	4.6	6.3	$115.50	$3.52	2.59	32.80
Grand Rapids, MI	31.5	31.5	5.5	11.5	$83.93	$2.75	2.44	30.54
Madison, WI	41.5	41.5	12.0	14.6	$108.57	$2.85	3.03	38.15
Minneapolis /St. Paul, MN	292.8	248.5	78.6	70.0	$126.82	$3.56	3.07	35.65
Spokane, WA	43.3	43.3	8.9	11.0	$113.58	$3.92	2.08	28.94

Operating Expense per Vehicle Revenue Hour

This measure examines the cost for every hour a transit vehicle is in service. This measure includes driver salary, fuel, and wear and tear on the vehicles for only fixed-route bus service (and no other enhanced or rail transit services). The systems included in this review range from approximately $85 to more than $125 per vehicle revenue hour. While there are many possible reasons for significant variations (union vs. non-union workers, fuel cost, vehicle maintenance costs, etc.), it is important to note that Mountain Metro is one of the lower-costing systems.

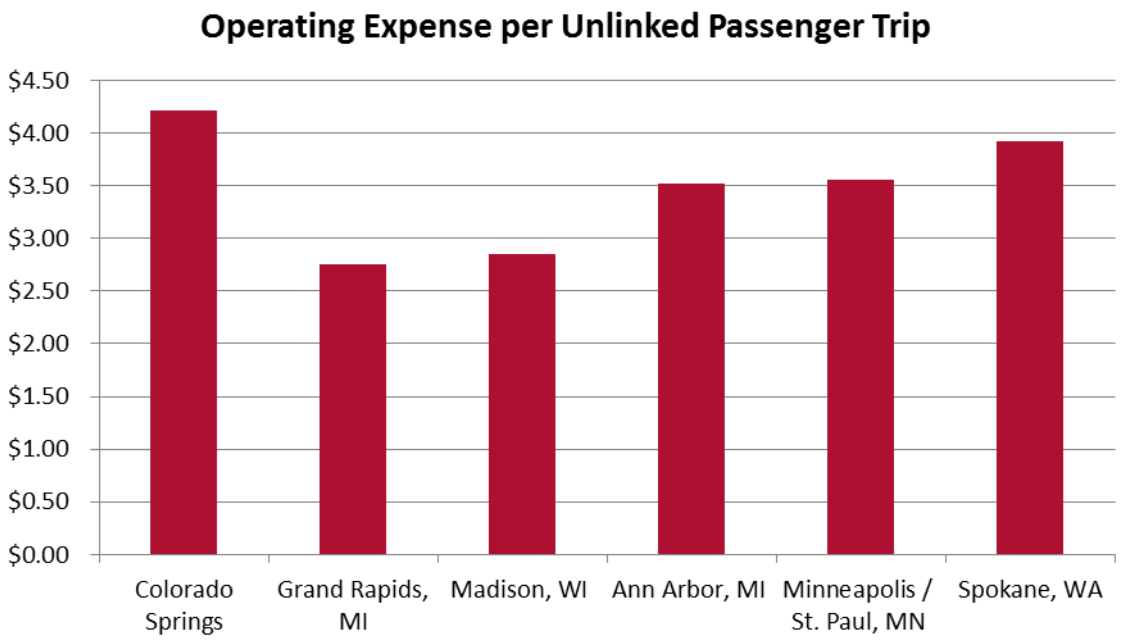
Figure 3.39: Operating Expense per Vehicle Revenue Hour



Operating Expense per Unlinked Passenger Trip

Ridership is an important measure of efficiency for any transit system. This value is calculated by NTD using the total operating expense divided by the number of unlinked passenger trips. This measure is important because it tells the project team how much it costs the agency to provide a trip. The Grand Rapids system has the lowest operating expense per unlinked trip, at approximately $2.75 per trip. Mountain Metro operating costs per trip is slightly more than $4.00; the peer systems included in this analysis fall under the $4.00 mark.

Figure 3.40: Operating Expense per Unlinked Passenger Trip



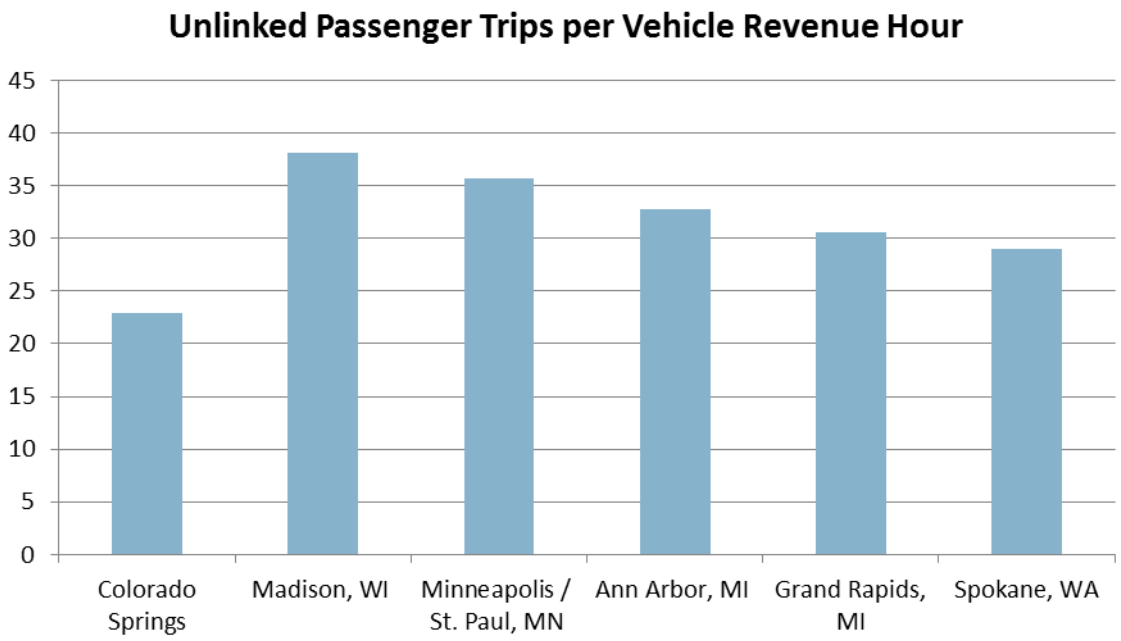
Unlinked Passenger Trips per Vehicle Revenue Hour

This measure examines the trips per vehicle revenue hour for the systems included in this analysis. The project team included this measure in the analysis to understand how many trips per hour each system carries, even though they are very different systems.

The Madison system boasts the highest number of passenger trips per hour at more than 35 passenger trips per hour.

All of the peer systems carry more trips per hour than the Colorado Springs system—in general, close to 30 unlinked passenger trips per hour.

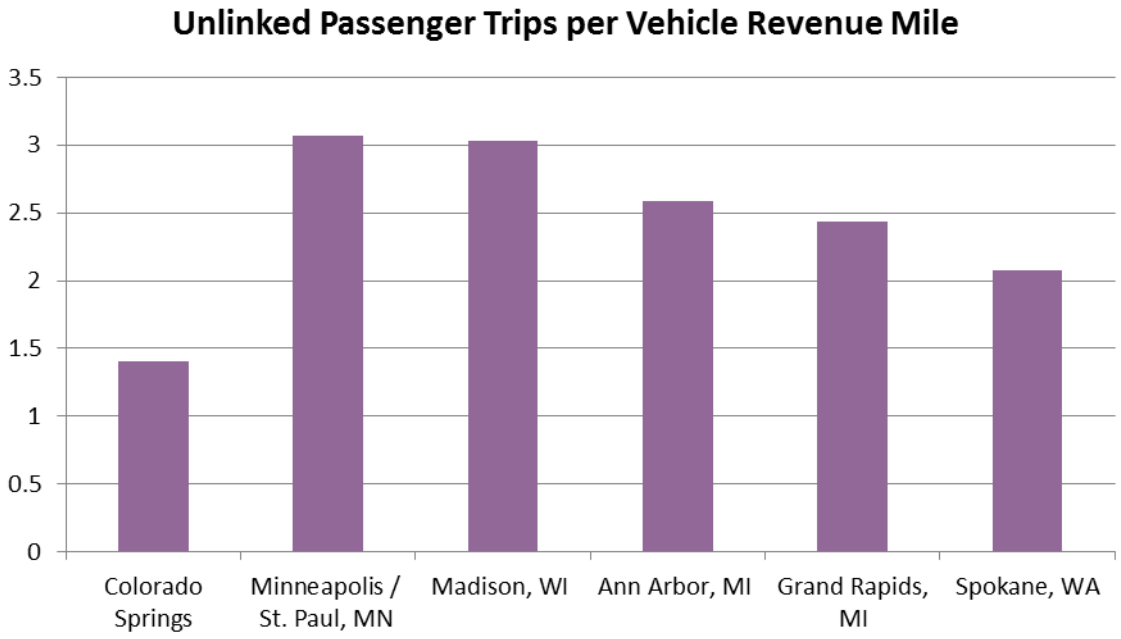
Figure 3.41: Unlinked Passenger Trips per Vehicle Revenue Hour



Unlinked Passenger Trips per Vehicle Revenue Mile

This measure looks at how many trips the system carries per mile—which is important for comparing the systems given they cover very different service areas. The Minneapolis/St. Paul and Madison systems carry slightly more than three trips per mile, whereas the remaining systems included in this analysis are more than two.

Figure 3.42: Unlinked Passenger Trips per Vehicle Revenue Mile



Innovation and Success

The factors reviewed to understand the peer systems' overall success and innovative approaches included:

- Technology and amenities
- Policy
- Service models.
- Operations

Technology and Amenities

The transit systems included in this practice review have a variety of technology aspects to offer passengers to improve the ride experience.

Four of the five peer transit systems offer real-time maps of the vehicle locations, but real time signage only at select stops.

Real-time bus location information is available online and on smart phones, but not all riders have access to smart phones.

Four out of five of the transit systems provide WiFi service on some of their buses. None of the systems provide this service on all of their vehicles and many of them are still in the pilot or experimental phase of offering this kind of technology.

The transit system in the Minneapolis/St. Paul area is the only one of the providers of a sophisticated passenger shelter. The heated facilities make riding transit in the winter much more feasible for people.

Policy

Local governments in Grand Rapids, Minneapolis/St. Paul, and Spokane have adopted formal policy that connects transit with land-use policies. Implementation of these policies has been instrumental in growing population and employment around transit points of access.

The transit systems in Grand Rapids and Minneapolis/St. Paul offer either bus rapid transit (BRT) or light rail. These services provide a quicker, more direct service for passengers. The transit system in Minneapolis/St. Paul also offers some bus-only lanes, which alleviate congestion.

The transit systems in Ann Arbor and Grand Rapids offer creative solutions to make it easier for people to rely on transit for more of their trips. Ann Arbor provides a taxi service substitute for a slightly higher cost than a bus fare (but significantly lower cost than a traditional taxi service) for passengers traveling late at night or on holidays. Grand Rapids provides a service for people who need help traveling the first mile distance to the bus stop for a small cost. Additional information on service models and operations of the services is provided in Table 3.19.

Table 3.19: Successful Contributors from Peer Cities

Urbanized Area	Technology	Policy	Service Models	Operations
Ann Arbor, MI	Real-time map Find nearby stops with address finder[22]		Late-night taxi service in lieu of transit service[23] Shared-ride taxi service when normal services do not operate23	Intelligent Transportation Systems (ITS) Discounted passes for employees and college students[24]
Grand Rapids, MI	Real-time map Wifi on BRT Real time signage on BRT	Transit oriented development overlay districts Guide development to transit corridors	Service from door to closest bus stop[25] BRT line (Silver Line) Pre-paid boarding for BRT 3 bike racks per vehicle	Subsidized college pass[26]
Madison, WI	Real-time map Wifi on two types of buses			Automatic payment card[27] Discounted passes for employees and college students[28]
Minneapolis /St Paul, MN	Real-time map Real time signage at select park and ride facilities and transit centers[29] Heated shelters on transit corridor	Plan for sustainable growth[30]	Free ride bus with service between two light rail lines (and through downtown)[31] Bus rapid transit and light rail service[32] Discounted passes for jobseekers[33] and the homeless[34]	Automatic and discounted payment card[35] Passes available for purchase at retailers[35] Discounted passes for employees and high school/college students[36] Bus only lanes on transit corridor[37]

[22] *Schedules, Maps & Tools.* 2014. Ann Arbor Area Transportation Authority. Web. October 22, 2014. <**http://www.theride.org/SchedulesMapsTools/tabid/62/ctl/InteractiveMap/mid/2257/Default.aspx#FindAStop>**

[23] *Holiday & Late Night Service.* 2014. Ann Arbor Area Transportation Authority. Web. October 22, 2014. <**http://www.theride.org/Services/HolidayLateNightService**>

[24] *Employer Programs and Services.* 2014. Ann Arbor Area Transportation Authority. Web. October 22, 2014. <**http://www.theride.org/Services/EmployerProgramsandServices>**

[25] *PASS.* The Rapid. Web. October 22, 2014. <**https://www.ridetherapid.org/additionalservices/pass>**

[26] *College Information.* The Rapid. Web. October 22, 2014. <**https://www.ridetherapid.org/howtoride/collegeinformation>**

[27] *Metro Commute Card.* 2014. City of Madison. Web. October 22, 2014. <**https://www.cityofmadison.com/metro/fares/commuteCard.cfm>**

[28] *Metro Pass Program.* 2014. City of Madison. Web. October 22, 2014. <**https://www.cityofmadison.com/metro/fares/PassPrograms/index.cfm>**

[29] *NexTrip Real-Time Bus Departures*. 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/real-time-bus-departures>**

[30] *Chapter 2: Transportation of Minneapolis Plan.* 2009. City of Minneapolis. Web. October 22, 2014. <**http://www.ci.minneapolis.mn.us/www/groups/public/@cped/documents/webcontent/convert_277813.pdf>**

[31] *Ride free, ride green along Nicollet Mall.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/ride-free-on-nicollet-mall>**

[32] *Metro System.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/metro-system>**

Urbanized Area	Technology	Policy	Service Models	Operations
Spokane, WA	Wifi on articulated buses[38]	Transit oriented policies in comprehensive plan[39]		Automatic payment card[40] Discounted passes for employees[41]

[33] *Job Seekers.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/jobseekers>**
[34] *Discounted Fares for Agencies Serving the Homeless.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/eligiblecharitableorg>**
[35] *Go-To Cards.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/go-to-card>**
[36] *Passes.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/passes>**
[37] *World-class express bus service on Marq2.* 2014. Metro Transit. Web. October 22, 2014. <**https://www.metrotransit.org/marquette-and-2nd-avenues>**
[38] *Wireless Internet on Articulated Buses.* Spokane Transit. Web. October 22, 2014. <**http://www.spokanetransit.com/ride-sta/view/wireless-internet-on-articulated-buses>**
[39] *Chapter 2 – Urban Land Use Planning Principles*. Spokane County. Web. October 22, 2014. <**http://www.spokanecounty.org/bp/data/Documents/CompPlan/Chapter2.pdf>**
[40] *Smart Cards.* Spokane Transit. Web. October 22, 2014. <**http://www.spokanetransit.com/fares-passes/view/smart-cards/>**
[41] *Employer Sponsored Bus Pass Program.* Spokane Transit. Web. October 22, 2014. <**http://www.spokanetransit.com/fares-passes/view/employer-sponsored-bus-pass-program>**

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4 Stakeholder Involvement

Purpose

A thoughtful stakeholder outreach and involvement approach served as an important component of this planning process. Input from community members, especially those who utilize the transit system or would like to, was critical to identify system needs and develop refined recommendations to address those needs.

The overall aim of the outreach process was to build broad public support for the plans to assist in implementation.

The following sections provide an overview of the stakeholder involvement process, including details on the key themes collected that helped to guide the development of the plan.

Stakeholder Involvement Strategy

Early in the project, the team developed a stakeholder involvement strategy to ensure input was received and incorporated into the development of the potential transit improvements. The development of the stakeholder involvement strategy was predicated on the following broader goals and objectives for public participation:

- Share information on the:
  - Overall planning process and opportunities for participation
  - Current state of transit in the PPACG area
  - Possibilities for transit in the future include the identification of projects for both fiscally constrained (expenditures equal available funding) and vision plans
- Provide a wide range of stakeholders multiple ways for participating in the planning process.
- Obtain input to fully understand the current system, including what is working well, areas for improvement, and external challenges and opportunities that need to be considered.
- Obtain continual guidance for the direction of the Transit Plan
- Obtain input to help refine recommendations

Stakeholder Involvement Activities

Public involvement activities were planned at key points during the planning process to fully realize the goals and objectives for stakeholder participation.

These activities worked to promote ongoing communication among stakeholders, decision-makers, and transit planners.

Steering Committee (see the Executive Summary and Introduction for membership) members were invited to be a part of the process because they have expertise on transit and specialized transportation-related issues and represent a larger constituency. The Steering Committee met four times:

- Steering Committee meeting #1 – This meeting provided an introduction for members. The group reviewed and refined the expectations of the Steering Committee and concurred with the project process and schedule. The Committee members identified key strengths, weaknesses, opportunities and challenges (SWOC) of the existing transit and specialized transportation systems. This information provided a common understanding to begin the planning process and engagement with public stakeholders.
- Steering Committee meeting #2 – The Committee reviewed and refined the guiding themes and the evaluation process. The guiding themes provided a framework for the development of potential improvements for consideration by the broader public stakeholders.
- Steering Committee meeting #3 – The Committee reviewed and refined the recommendations prior to their presentation at a community meeting.
- Steering Committee meeting #4 – The Committee provided final feedback on the prioritization of recommendations (i.e., near-, mid- and long-term) and cost estimates. The Committee also discussed next steps including what members can do to ensure the plan is implementable.

Community Mobility Review

Input was collected at the beginning of the process to develop a refined understanding of the public transit system – its strengths, weaknesses, and external opportunities and challenges.

To kick off the community transit review, the team conducted one-on-one discussions with 15 representatives from the Steering Committee organizations.

The goal of these discussions was to gain individual perspectives on the current provision of transit and specialized transportation in the PPACG area. In addition, three focus groups were held on June 20, 2014 with system users and others affected by the availability of transit and specialized transportation. The participants invited to the focus group meeting included:

- Seniors
- Young professionals
- Representatives of organizations serving low-income and minority groups
- Members of the business and development community
- Representatives of large employers and other activity centers (shopping, etc.)
- Representatives from local schools and universities

- Specialized transportation service providers

Themes from all of the conversations were documented and incorporated into the project's transit audit, and shared via the project website.

Project Website

A unique project website was developed to educate stakeholders and provide opportunities for online input.

http://www.movingforwardplan.org/transit-and-specialized-transportation-plans/

The website provided an overview of the purpose of the Transit Plan and the multiple mechanisms to actively participate in the plan's development. The website was linked through the 2040 Regional Transportation Plan (Moving Forward Plan) to demonstrate the Transit and Specialized Transportation Coordination plans connection to the regional transportation planning process.

The website was continually updated with new information and documents (such as presentations and summaries from Steering Committee and community meetings).

The website included online versions of the two project questionnaires to allow simple submittal of stakeholder comments. Contact information including an e-mail address and phone number to reach project team members was provided for ongoing comments and questions.

Community Meetings and Questionnaires

Two community meetings were held on August 28th and November 19th of 2014. Approximately 37 community members attended the August meeting and more than 20 at the second. Both meetings involved a presentation and a full group question and answer period. Open house sessions before and after each main presentation provided stakeholders the opportunity to engage directly with the project team and provide feedback. Stakeholders participated by:

- Responding to key questions by writing notes and comments directly onto the flip charts used during the session
- Completing a project questionnaires
- Sharing input directly with project representatives

Social media was used to provide information and gather input during the sessions to ensure community members that were unable to attend could ask questions via Twitter. A sign language interpreter was provided at each of the community meetings. The presentations meetings were documented on film and published on the project website for broader review by public stakeholders.

The first community meeting was to inform public stakeholders about the purpose and goals of the plans and the guiding themes that would inform future recommendations. Participants were asked to provide input on whether the guiding themes were appropriate, including any positive or negative impacts that should be considered.

The second meeting was to share draft recommendations and obtain input to ensure they were appropriate, to refine them, and to share implementation ideas.

The questions asked at the meetings were also provided online for stakeholders that could not attend, and drew nearly 70 responses.

Detailed summaries of all input were published on the project website.

The information from the first meeting was used to develop specific recommendations, and the input from the second meeting refined them.

Publicity

Each of the community events was widely publicized to encourage the broadest participation possible. The project team conducted activities to promote stakeholder attendance at the events:

- Provided media advisories to local radio and newspapers.
- Posted flyers on buses and at community locations such as the YMCA and community kiosks.
- Distributed focused e-mail blasts to stakeholder groups
- Provided updates to various organizations' websites, Facebook and Twitter pages.

Results & Key Involvement Themes

A wide variety of stakeholders provided a significant amount of input to guide the direction of this plan. .

Input received was documented and provided the guidance needed to develop recommendations.

Several key themes surfaced through the outreach activities. Examples of these themes are included in Table 4.1.

Table 4.1: Key Stakeholder Input Themes

Theme	Details
Limited transit frequencies	Many people do not use transit services because of the limited frequency and schedule. Also, riders often have to travel far distances to transfer and the headways are long, leading to long trips. Better connection between north/south and east/west routes is needed. People often have to walk far distances to get to their destinations due to the number of stops. Ridership is generally limited to people who do not have another transportation choice, due to these constraints.
Increasing demand and changing demographics	The demand for transit services is expected to increase in the future, due to the increasing aging and young professional populations. There is a real or perceived view that young professionals are leaving the area because they want a multi-modal transit lifestyle. Also, UCCS is expected to expand to 15,000 by 2020.

Theme	Details
Financial constraints	Perhaps the biggest challenge is constrained financial resources, which is perceived to be partially a result of a limited volume of riders. Funding is also impacted by the region's unpredictable political environment in which priorities continue to shift. Many people recommended considering different operational structures to help overcome financial constraints. One example is development of a regional transit district, as recommended in the "Future of Regional Transit" report. Other ideas are to restructure the way PPRTA dollars are allocated and identify new funding sources. Many people also highlighted opportunities for public-private partnerships, especially to fund services outside of the core area.
Need for density to support efficient urban services	The Pikes Peak Region has low population density across a large geographic area, and new development continues to expand away from downtown. Many people highlighted the need to incorporate transit as part of a broader economic development and land use planning strategies such as tying economic development zones to transit, providing incentives for infill development, building upon the City of Champions to ensure transportation options for visitors, and encouraging assisted-care facilities to develop close to transit.
Public education	A strong public relations and education campaign is needed to demonstrate the value of transit to the community and encourage riders with other transportation choices to use services.
Service to military installations	Services are needed at military installations, which will require overcoming challenges related to security issues and varied working hours.
High-capacity transit	People are interested in exploring new modes of service in the future, such as bus rapid transit, light rail, and streetcars.

Community members supported the four fixed-route guiding themes shared at the August 28, 2014 public meeting:

- Focus on the existing service area
- Improve service span and frequencies
- Improve connectivity, transfers and hubs
- Provide new services and service models

There was especially strong support for increasing the span and frequency of service, and improving connectivity, transfers, and hubs. People noted that these improvements are critical to increase ridership. Most people agreed that it makes sense to focus on improving the existing service area before expanding into new areas. At the same time, numerous existing routes were identified for improved or expanded service, many of which could be served with different modes such as call-and-ride or flexible-route services.

Community members also supported the draft recommendations shared at the November 19, 2014 community meeting, which built upon the previous guiding themes.

Stakeholders shared their ideas for encouraging coordination between land use and transit such as requiring consideration of transit in land use plans, improving communication, and providing incentives for infill development.

Most people agreed with improving service along key transit corridors, though many highlighted that this approach will only work if improvements are made to the entire system over time. There were several comments that focused on ensuring timetables are realistic.

There were few comments regarding specific new service areas, with the exception of supporting growth on the east side of the region.

Participants expressed the need to provide accessibility for people with disabilities to use the fixed-route system rather than need to rely on specialized transportation. This included ensuring there is sufficient sidewalk infrastructure and bus stop amenities such as shelter from the elements.

5 Themes, Initial Options, & Recommendations

Introduction

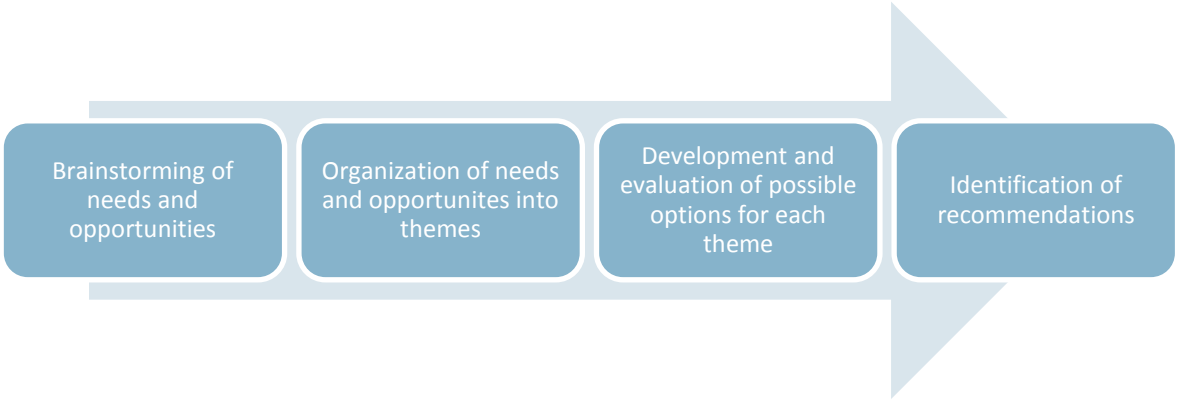
The purpose of this chapter is to document the development of potential transit improvements and policies for the Transit Plan, including:

- Analyzing transit strengths, weaknesses, challenges, and opportunities
- Developing theme categories
- Formulating initial transit improvements and policies
- Refining final recommendations

The development of transit options for inclusion in the Transit Plan was an organic process, primarily derived from stakeholder input.

The project team helped to shape the ideas for potential transit improvements and policies to formulate specific transit recommendations and priorities in the near-, mid-, and long–term planning. Figure 5.1 provides a graphic representation of the process from identifying challenges and opportunities, formulating themes, and ultimately to providing recommendations for the Transit Plan.

Figure 5.1: Themes and Recommendations - Process



The project team engaged with key stakeholders early in the process to understand the current strengths, weaknesses, challenges, and opportunities associated with transit service within the study area.

The scoping of ideas was documented through the initial meeting of the project's Steering Committee and the first open-house public meeting.

Examples of the transit strengths, weaknesses, challenges, and opportunities identified by stakeholders are included in Table 5.1.

Table 5.1: Example Stakeholder Brainstorming Results

Example Brainstorming Results
Strengths – Current positive points of the existing services
• Transit is resilient and is managing limited resources as effectively as possible (especially given significant reductions) • Effective services are provided by Fountain Municipal Transit • The bus fleet is clean and well-maintained • Drivers are generally professional, courteous, and well trained
Weaknesses – Current negative points of the existing services
• Transit is faced with significant financial constraints • Service frequencies and operating hours do not meet the needs of riders • The limited growth in ridership makes funding more challenging (and vice versa) • Multiple routes could be more strategically located to support better overall mobility and increase ridership • Improvements are needed to better time transfers between routes • Better connectivity to bus stops (pedestrian and cyclists) and better accommodation of cyclists is needed
Challenges – Potential barriers to improvement of services now and in the future
• Public transportation services do not appear to be a high priority for the region • Funding challenges are one of the largest barriers A combination of political dynamics, funding instability, diminishing federal funding, and competing annually for local funding needs present a significant challenge • The current system is likely not capable of addressing future demand given future population increases • The region's low density and continued trend toward suburban development is challenging (and expensive) to serve with transit • There is a real or perceived view that young professionals are leaving the area because they want a multi-modal transit lifestyle • The region's wide range of stakeholders creates difficulties building consensus on funding and operating transit
Opportunities – Potential ideas, project, or policies to improve the overall services now and in the longer term

Example Brainstorming Results

- Increase collaboration among organizations to better understand riders' needs (military, universities, etc.) and to develop creative partnership opportunities
- View transit as essential to economic development and encourage more strategic land-use planning (economic development zones with transit, infill incentives, City for Champions, etc.)
- Consider different operational structures to develop a shared regional system
- Develop a stronger community education campaign (education, military, etc.)
- Consider new modes of transit such as bus rapid transit (BRT), light rail, etc. for high-capacity transit corridors
- Prioritize connectivity for military and military employees (as some of the largest employment centers)
- Consider incentives to military installations such as prioritizing dedicated carpool and transit gates and utilizing the military mass transit benefits, etc.

The strengths, weaknesses, challenges, and opportunities were analyzed and used to develop themes for potential projects or policy improvements. These themes were used throughout the planning process to categorize the ideas, policies, and potential projects considered for inclusion in the Transit Plan. The themes formulated by the stakeholders included:

Theme 1: Focus on the Existing Service Area

This theme involves focusing resources on improving services within the current service area before extending new services outside the boundaries.

Theme 2: Improve Service Hours and Frequencies.

The focus of this theme is to provide longer service hours and higher frequencies to better serve existing and future riders.

Theme 3: Improve Connectivity, Transfers, and Hubs.

The goal of this theme is to create a more seamless journey for riders by improving timed transfers and limiting the number of transfers and out-of-direction journey time needed to reach key destinations.

Theme 4: New Service and New Service Models.

This theme examines the need to expand beyond the existing service area and focuses on new service models and funding options to meet the needs of lower-density outlying areas.

Themes & Initial Options

The following sections provide additional background on each of the key themes generated through engagement with stakeholders. Each theme formed the basis for development of the initial options, which are presented as improvements to transit or potential new policies supporting transit in the near-, mid-, and long-term future.

Theme 1: Focus on the Existing Service Area

The 2009 economic downturn dramatically impacted Transit. The resulting changes to Mountain Metro service included reducing the geographic area of service, reducing the frequency of service, and eliminating longer-distance services.

The service area has remained fairly static since the 2009 budget reductions. Service ranges from the Briargate area in the north to the Security-Widefield and PPCC areas in the south; the eastern limits are along the Powers Boulevard corridor and the Constitution Hills area, and the western edge of the Mountain Metro service area extends into Manitou Springs.

The 2014 transit system provides a base level of service, with buses running at 30- to 60-minute frequencies. Major priorities are to improve the span of service hours and bus frequencies, and to improve connections to areas currently served by transit:

- Build on the current ridership base
- Encourage greater land use intensification
- Promote more walkable communities
- Capture more transit riders

Previous studies and public input recommended to expand the service area back to pre-2009 service levels and to expand to serve new-growth areas. However, the geographic expansion of services would:

- Continue to spread the system's resources too thin
- Create challenges to maintain base levels of service
- Encourage auto-oriented development
- Reduce the cost effectiveness of services

Focusing within the existing service area is therefore preferred; to concentrating services in transit-supportive areas that are aligned with transit-oriented land-use policies will provide a greater benefit to the community.

There are opportunities within the existing service area to encourage increased density that will support transit and improve service over time.

Encouraging higher-density development and mixed land uses along major transit corridors provide opportunities for:

- Improved walkability
- Increased street animation and vibrancy
- Rebalancing the needs of all transportation modes (i.e. improved cycling options)

Because of the symbiotic relationship between transit and land use, supporting mixed-use infill development and dense residential neighborhoods will help improve transit ridership over time. Increased transit ridership allows Transit to increase services, which improves the competitiveness of public transit as a mode of travel. Improving transit services increases the accessibility of, and therefore the desirability of, the areas it serves, leading to further redevelopment and intensification. The two together create a positive feedback loop towards developing a more transit-supportive community.

There are some policies already in place that support this positive feedback loop. For instance, the 2020 Colorado Springs Comprehensive Plan recognized the costs associated with improving the transportation system and that the coordination of transportation and land use is key to reversing

the largely auto-dependent nature of the community. The plan identifies provisions for the development of mixed-use activity centers that promote transit-oriented communities. However, the details for supporting these activity centers have not been developed.

However, the plan does designate specific mature/redevelopment corridors—which are generally existing retail corridors that offer opportunities to transform from exclusively auto-oriented places to more mixed-use centers through infill and redevelopment. The specific corridors identified are discussed in greater detail in Theme 2.

As part of the implementation of 2040 fixed-route transit planning recommendations, greater coordination between transportation and land use policies is fundamental to promoting the positive feedback loop.

Theme 2: Improve Service Hours and Frequencies

As discussed in Theme 1, coordination between transportation and land use policies is vital to creating the desired symbiotic positive feedback loop that will encourage development of a more transit-oriented community. Transit faced dramatic service reductions in response to fiscal pressures. Given that the existing network operates at general basic levels of service (30 and 60-minute frequencies during the weekday daytime), the preferred approach is to:

- Strengthen the current system first
- Build on the current ridership base and capture more riders

Promote a more human-scaled, denser and walkable urban form—the key conditions to initiate a positive feedback cycle towards improved transit.

The land use map (updated January 2014) for the 2020 Colorado Springs Comprehensive Plan identifies a number of mature/redevelopment corridors. These are older auto-oriented commercial corridors that have greater potential for redevelopment to more mixed-use developments. Examples of these corridors include Academy Boulevard, Nevada Avenue, and East Platte Avenue.

Redevelopment, growth opportunities, and the needed transportation connections along these corridors are also included in the 2035 Regional Transportation Plan Update (adopted, January 2012), which identifies these roadways as rapid transit corridors to provide improved frequency, speed and service quality.

The future travel patterns assessment conducted for this plan further strengthened the need for rapid transit along these same corridors including sections of:

- Academy Boulevard
- Nevada Avenue
- Platte Avenue
- US 24/Colorado Avenue

These corridors are within the traffic zones most traveled to in both the 2010 and 2040 time frame. These routes are a focus for this plan and form ‘core corridors’ for future expansion. US 24

was one of the top ten most traveled zones in 2010. Other than Chapel Hills Mall area, the data did not demonstrate high travel flows to traffic zones along the Woodmen Road corridor in 2.

Academy Boulevard, Nevada Avenue, Platte Avenue, and US 24/Colorado Avenue have been defined as core corridors, which are characterized as services with operating the high frequencies and wide service spans.

The Austin Bluffs Parkway/Garden of the Gods Road corridor is observed to provide important east-west linkages to the Garden of the Gods commercial area, UCCS, and the Marketplace at Austin Bluffs, while reinforcing core transit connections at North Nevada Avenue and North Academy Boulevard.

Consistent with the direction of Transit's recent Comprehensive Operational Analysis (2013), the purpose of identifying these corridors is to develop a priority network of higher frequencies and a wider service span as the system transitions to providing more "spontaneous use" services where service frequencies (typically at four buses per hour or greater) allows for passengers to use services without having to consult a schedule. Without a broader offering of services in off-peak periods (e.g. weekday evenings, Saturdays, and Sundays), the system's market will be largely limited to users with "lifeline" needs.

A system like Mountain Metro requires a suite of services providing different roles. Core services, while important in linking to major destinations in the service area, rely on a supporting network that provides adequate service coverage within the existing service area—as a majority of passengers do not begin or end their journey within walking distance to Core corridors. Thus, a network of Intermediate corridors, have been identified to provide an improved level of service coverage and frequency (at a lower priority than Core corridors) to provide the needed connections to neighborhoods and destinations not close to Core Routes. Based on these route classifications, a preferred route network concept was developed to provide direction on how the proposed network would operate and guidance for improving service over time.

Theme 3: Improve Connectivity, Transfers and Hubs

Network Structure

To provide a service competitive to the automobile, it is important for agencies to create services that minimize travel time for passengers. Aside from providing services that are quick and frequent, it is also important to minimize the amount of transfers, because transfers affect the total travel time of a passenger journey. Given the dispersed and low-density nature of the area's urban centers, passenger transfers are an inevitable part of many passenger trips. Thus it is important to provide services that reduce overall passenger waiting time.

The current system operates based on a multi-hub route structure where services generally converge around one primary hub (at the Downtown Terminal) as well as a series of transfer hubs, including the Citadel Transfer Center, Voyager Parkway Transfer Center, PPCC, and Hancock Plaza. The Downtown Terminal and the Citadel Transfer Center are the largest in the systems. Where feasible, route schedules are coordinated to arrive at hub locations at specific clock face times to

reduce the amount of waiting time at transfers. Since current services operate every 30 to 60 minutes, this coordination is key to minimizing passenger travel times.

A number of stakeholder sessions discussed the feasibility of transitioning the system's current multi-hub route structure to a grid-based network. As discussed in the Comprehensive Operational Analysis, the immediate opportunities for success of the system are primarily to provide improved connections along Core and Intermediate corridors rather than widespread areas. A transition to a grid-based system requires significant investment in service frequencies across the entire service area for the system to operate effectively, given that the premise of a grid-based system is that transfers would occur at all points where two or more routes intersect. Thus, a grid-based system would need services (as discussed in Theme 2) that promote the "spontaneous use" of services where services are frequent enough that allows passengers to not have to organize trips around a transit schedule. While the ultimate goal is to shift to a modified grid, Theme 2 identifies how priority corridors could improve services under the current structure in the interim.

To continue to support increased ridership (in the interim) under a multi-hub route structure, it is important to continue to coordinate bus departure times that minimize passenger waiting times and to ensure that the transfer hubs are safe and comfortable for passengers.

This would ensure that the transfer hub facilities are well maintained, and include adequate shelter from the elements, as well as seating and passenger information.

Connections with Intercity Services

Not only is it important to ensure that Mountain Metro services are well coordinated, it is equally important to plan for a network that is well integrated with other services. The CDOT has made progress on its Interregional Express Bus Plan, which proposes the operation of an intercity bus service—branded as Bustang. Bustang service would board and alight passengers at strategic points along I-25 in Colorado Springs including:

- Tejon Park-and-Ride
- Colorado Springs Downtown Transit Terminal (Kiowa St and Nevada Ave)
- Woodmen Park-and-Ride
- Monument Park-and-Ride

Service would be provided to and from these locations to various destinations in central Denver, including Denver Union Station as the final stop. Services are geared more to a work commuting market with five of seven trips operating during the weekday peak period towards Denver in the morning and the reverse in the afternoon.

Given that the Downtown Transfer Station is the primary hub for transit services in Colorado Springs, further consideration by CDOT should be made to provide improved connectivity to the terminal and boost ridership opportunities for both services. Mountain Metro services should also be coordinated where possible to accommodate convenient passenger transfers.

It is important to ensure that the Park-n-Ride facilities along I-25 are safe and well maintained to support the new Bustang service.

The new Bustang service was originally conceptualized in the CDOT's Statewide Transit Plan. This plan and others (Central Front Range Transit Plan and the Intercity and Regional Bus Network Plan) provide a framework to support transit in the PPACG area, as well as enhance transit services in the surrounding counties. While many of these areas are outside of the PPACG area and not part of this plan directly, this plan does support the recommendations of these plans aimed at enhancing mobility. Stronger transportation networks in surrounding counties, with links to and from the PPACG area would only strengthen transit as a whole and contribute to the success of this plan. Examples of some of the specific recommendations of CDOT's plans that contribute to the success of this plan include:

- Providing regional service from Cripple Creek to Woodland Park to Colorado Springs; from Canon City to Florence to Colorado Springs and between Colorado Springs and Summit County
- Implementing the Interregional Express (Bustang) service between Colorado Springs and Pueblo
- Providing essential services between Limon and Colorado Springs; Canon City and Colorado Springs; and Alamosa and Colorado Springs
- Implementing multiple strategies to provide general public transit services throughout Teller County

Theme 4: New Service and New Service Models

As discussed in Theme 1, the preferred approach for improving transit service is to focus on the existing service area before expanding the geographic area served by the fixed-route network. The existing service area includes the densest corridors and developments within the metropolitan area. The areas outside of the existing service area are generally low density. These low density land uses do not provide the conditions necessary to generate ridership and deliver cost-effective transit services with conventional scheduled fixed-route service models. For example, the indirect and curvilinear road network in Northgate and the exurban development structure of Black Forest poses significant operational and fiscal challenges. Additionally, stakeholder sessions noted the desire to provide services to military installations, but the security measures required to enter the premises and the time at which military personnel travel makes it challenging to operate within the existing service network.

Thus, if communities and organizations located beyond the existing service boundaries wish to be served with transit, a demonstrated ridership level or additional financial support should be required to operate and justify the service.

There are a number of alternative service provisions that could provide a basic level of services for passengers that scales down the costs associated with providing transit service in these lower-demand and special destination areas. Three alternative service types that could be considered are summarized in Table 5.2. It is recommended that Transit work closely with these stakeholders

to identify the appropriate service model, financial implications, ridership potential, and financial contributions to bridge any funding gaps.

Table 5.2: Alternative Service Delivery Options

Delivery Options	Description
Deviated fixed route service	Service operates generally along the community's major arterial road, but makes diversions within a defined distance away from the corridor. Routes typically make connections to a major transit hub where a higher level of fixed route transit services is available. Passengers are required call to request a pick-up if not at the route's major transit hub, while drop-offs can generally be requested to the bus operator upon boarding. Service generally still operates on a structured schedule. For instance the service departs from the main transit hub at a fixed schedule once an hour.
Area-based demand response service	Service operates within a defined service area but does not have a fixed route. Similar to deviated fixed route, routes typically make connections to a major transit hub where a higher level of fixed-route transit services are available. Passengers are generally required to call for both pick-ups and drop-offs, but services generally operate on a structured schedule.
Limited service operations	Services are provided on a fixed route and fixed schedule but only for select days of the week and at very specific time periods. For example in exurban or rural communities, transit agencies provide service on a rotating schedule once a week to serve trips marketed to seniors to accommodate shopping trips and scheduled medical visits.

Recommendations

Based on the considerations and assessments in support of the four themes, a recommended set of directions has been identified to meet the plan's objectives. The set of directions are geared to face the challenges in the systems by expanding its current transit market to offer greater transportation choice for passengers, while at the same time being effective and efficient with scarce financial resources available. The plan proposes incremental increases in frequency, span of service, and quality of services within the existing service area. These incremental increases are intended to provide improved access to jobs, goods and services to both choice and transit-dependent riders, relieve traffic congestion, improve environmental conditions, and help to improve the coordination and delivery of other transportation services offered.

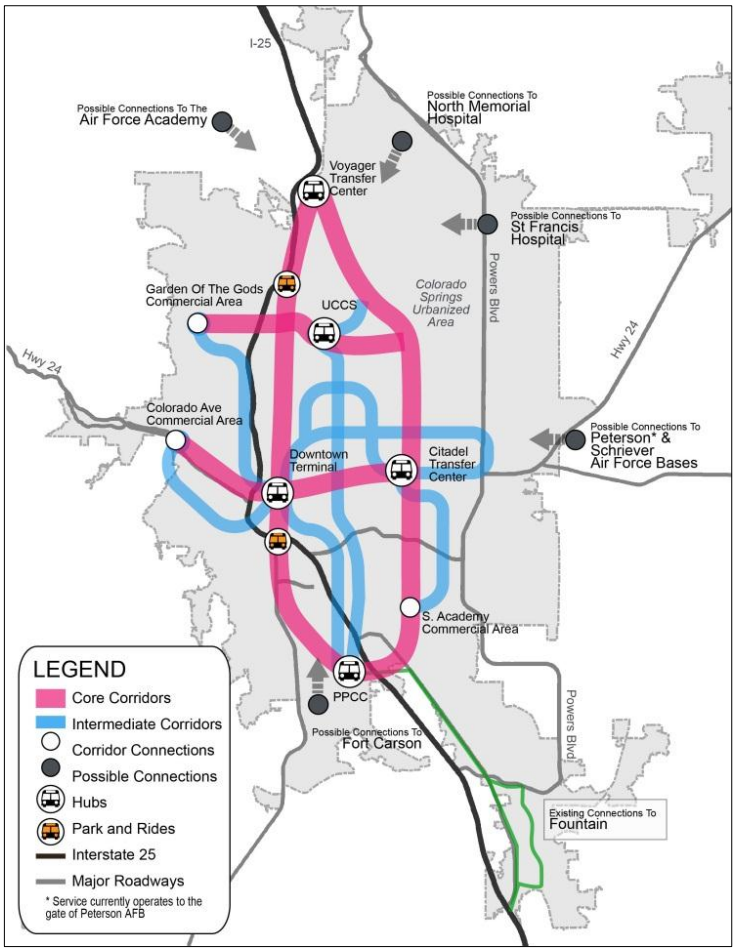
Focus on the Existing Service Area

Due to the fiscal challenges facing Transit in recent years, the limited span and frequencies for the existing services have constrained the ability to expand ridership levels to capture more transit riders. Thus, it is recommended that Transit focus first on improving services within the existing service area, while at the same time, encouraging more transit-oriented development at strategic activity centers and corridors. A coordinated and integrated approach in achieving these two priorities will help to build ridership over time and develop a culture of transit use over time in a cost-effective manner.

Improve Service Frequency and Span

The recommended direction is based upon a refined route network structure as identified in Figure 5.2, which follows the continued operation of a multi-hub network structure, with the Downtown Terminal being the primary transit hub, along with secondary transfer hubs at Citadel Mall, Voyager (near Chapel Hills Mall), PPCC and the UCCS.

Figure 5.2: Recommended Route Network Structure



Core corridors, identified in pink, provide the backbone of the proposed network, which provides connections to the most heavily traveled destinations within the existing service area. Transit is working toward this network refinement. Route 5, a high-ridership route between the Downtown Transit Terminal and Citadel Mall Transfer Center was improved during the spring of 2015 to operate every 15 minutes. This high level of service has never been operated by Mountain Metro, but is an example of the direction the organization is taking to increase frequencies on the highest ridership routes, or Core corridors. The goal of the improved transit frequencies is to increase the overall productivity and performance of the system, to improve mobility, and to attract new customers. By enhancing frequencies on Core east-west and north-south corridors that serve the system's multiple hubs, customer mobility can be improved throughout the service area more effectively.

Services that operate along these corridors would be largely prioritized for service frequency increases and time span expansion earlier in the plan's horizon.

Intermediate corridors, identified in blue, serve to complement Core corridor services to support a basic level of service coverage along other major corridors. The Intermediate corridors generally link to fewer major destinations than Core corridors. Finally, local routes, which are not identified in the route network concept, fill in the remaining missing service coverage gaps by providing other neighborhood connections required as supported by ridership. Table 5.3 outlines the proposed ultimate service frequencies and span by type of corridor and service period in 2040.

Even as service frequencies will be improved particularly to Core and Intermediate corridors, schedules should be coordinated to arrive at hub locations, where feasible, at specific clock-face times to reduce the amount of waiting time at transfers.

Table 5.3: Proposed Level of Service by Corridor Type by Service Period

Corridor	Weekday Daytime (6am-6pm)	Weekday Evening (6pm-12am)	Weekend Daytime (7am-6pm)	Weekend Evening (6pm-11pm)
Core corridor	15 mins	30 mins	30 mins	60 mins
Intermediate corridor	30 mins	60 mins	60 mins	As supported by ridership
Local service	30 – 60 mins		As supported by ridership	

A high-level evaluation applied the criteria to gauge the potential performance of the recommendation. In general, improvements in frequencies and service span (weekends, evenings) could have the greatest positive impact on the system. Table 5.4 presents a summary of the application of criteria supporting the advancement of this recommendation.

Table 5.4: Criteria – Improve Service Frequency and Span

Criteria		Notes
Fiscal	●	Service span and frequency increases have the potential for the greatest impact on ridership improvement and should be a key priority.
Mobility	●	Enhances connectivity within the existing service area.
Community	●	Benefits (mobility, efficient travel, cost, etc.) outweigh any negative aspects for the community.
Deliverability	●	No technical constraints; service improvements could be made rapidly.

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

Maintain and Improve Transit Infrastructure

While improving transit services is important to growing the network's ridership base, it is also important that consideration is given to improve the whole ridership experience. Enhancing the ridership experience includes ensuring that bus stops, transfer hubs, and terminals are safe, comfortable, and well maintained. Thus it is recommended that resources be allocated to ensure the general upkeep of infrastructure and making improvements where required, including the possible relocation of the existing transit terminal to improve capacity and safety for passengers and bus operations.

Transit is currently planning to undertake the Downtown Transit Station Relocation Study to identify the prime location for a new downtown hub.

The current Downtown Transit Terminal is the central connection point in the Mountain Metro system. However, the current terminal has operational and safety deficiencies, as well as aesthetic challenges. The existing terminal has challenging entry and exit points, limiting operations and future growth. Many services currently board and alight on the adjacent streets, as opposed to directly accessing the terminal (which can add to overall travel time). The facility is currently at capacity and has limited space for future growth to accommodate system expansion.

Additionally, further study should be undertaken to improve the transfer hub conditions at Citadel Mall, including improving pedestrian access between the transfer hub and the shopping center as well as speeding up operations through this busy facility. The transit center at Citadel Mall is currently somewhat isolated due to a significant amount of vacant space at the mall. If the Citadel Mall were to be redeveloped or reconfigured, Transit could take the opportunity to best integrate and update the transit center. To provide better comfort and safety for passengers, it is important that bus stops throughout the system are well maintained, which include ensuring they are regularly swept, free of road debris, and free of vandalism. Bus stops should have at a minimum a bus pole at a prominent and visible location close to the roadside—included on the pole should be route information for scheduled trips at that specific stop. While all stops should accommodate persons using wheelchairs and other mobility devices, careful considerations and investment must also be made to ensure that the sidewalk network is extensive enough to provide all riders the needed access to reach their destination. Transit has made progress using grant funding to upgrade a number of stops with improved infrastructure (weather protection, seating, signage, etc.). A comprehensive, system-wide bus stop standardization project was recently completed by Transit to identify and implement consistencies in signage and amenities at bus stops. As funding becomes available, additional bus stop accessibility improvements will be completed.

A high-level evaluation applied the accounts to various aspects of this recommendation. Table 5.5 presents a summary of the application of criteria supporting the advancement of this recommendation.

Table 5.5: Criteria – Maintain and Improve Transit Infrastructure

Criteria		Notes
Fiscal	◐	High-quality, safe, and comfortable facilities have the potential to attract new riders. Cost of new or rehabilitated facilities is a concern.
Mobility	●	Well-designed facilities provide seamless connectivity across the system.
Community	●	Active and highly-utilized transit facilities could benefit local neighborhoods through increased foot traffic (eyes on the street) and additional mobility options for all.
Deliverability	◐	No complex technical challenges exist. Typical public controversy regarding new transit infrastructure, may be overcome with proper engagement and education.

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

Consider New Services and Models

Stakeholders' sessions conducted through the development of this plan revealed the need for transit services to areas beyond the existing service area, particularly new transit connections to suburban hospitals and military installations.

The key service standard metric would be for any proposed services to demonstrate an acceptable level of ridership and revenue return.

Where there are deficiencies in ridership, funding would be required from those agencies, communities, or private entities requesting the expansion of service. The funding would support the implementation, operations, and maintenance of the new services. Alternative service models, such as operating deviated fixed route services, area-based demand response service, and operating limited services on special days of the week, could be used to adapt services that best meet the travel needs of the community. Table 5.6 summarizes the connections to new service areas discussed during the study's public outreach sessions. The proposed new connections (like all other new services) would need to meet the service standards that will be established prior to approval and implementation.

Table 5.6: Possible New Services

Potential new services/destinations	Description of services
Union Boulevard	Provide new service north-south along Union Boulevard.
Memorial North Hospital	Possible extension of Union Boulevard service or shuttle route to/from Chapel Hills Mall.
St. Francis Medical Center	Extension of Powers Boulevard service (Route 23) northward to St Francis Medical Center.
Air Force Academy	Potential for flexible/on demand service.
Peterson AFB and Schriever AFB	Vanpool or peak hour service from popular park and rides.
Fort Carson	Potential connection to PPCC or vanpool/peak hour service from Park-n-Rides.

Union Boulevard

In an effort to improve the overall efficiency and coverage of the Mountain Metro network, the project team looked for gaps or potential areas of demand where limited (or no) service is provided today. The lack of service along the full extent of Union Boulevard creates a significant gap in the network. The closest major north-south services are currently provided by Route 25 (Academy Boulevard) on the east and either Route 6 (Wasatch Avenue) or Route 9A/9B (Cascade Avenue) on the west. The distance between these existing north-south options is more than three miles. Union Boulevard was identified as a potential north-south connection extending through the center of the existing service area. The Union Boulevard corridor has been categorized as an Intermediate corridor. The corridor has concentrations of multifamily residential and commercial uses along the corridor that are important origins and destinations for transit. Table 5.7 provides the application of criteria for this potential new service.

Table 5.7: Criteria – New Service Union Boulevard

Account		Notes
Fiscal	●	New service has higher cost, but also potential for strong return on investment; Union Boulevard service fills a significant north-south element of the transit grid and could increase performance on connecting routes (and the system as a whole).
Mobility	●	Provides new north-south connectivity and additional transfer options.
Community	●	Creates improved mobility options for the community as a whole.
Deliverability	◐	Implementation of new service will be challenging with new stop infrastructure and additional vehicles, but is not a fatal flaw (given the potential benefits).

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

Memorial North Hospital

Consultation with the project's Steering Committee and stakeholders revealed potential demand for the creation of new service to Memorial North Hospital (part of University of Colorado Health) at Briargate Parkway and Union Boulevard. The service could be an extension of proposed new north-south service along Union Boulevard or a connection from the hospital to or from Voyager Transfer Center. The hospital was identified as a critical destination, with limited connectivity for those who do not have access to a vehicle. Memorial North Hospital is a medical center serving the entire PPACG area and the proposed service would draw ridership from across the network. The growing residential, commercial, and employment in the northeastern section of the metropolitan area is increasingly difficult to navigate, other than by car. The curvilinear streets and cul-de-sac road networks tend to funnel all transportation options (auto, transit, pedestrians, cyclists) to major thoroughfares that are not always accommodating to modes other than autos. Additionally, following the major thoroughfares can result in longer and indirect routing for pedestrians and cyclists. Transit provides a good alternative for mobility in this area. Multiple service models should be examined to determine the most efficient provision of service. Table 5.8 provides the application of criteria for this potential new service.

Table 5.8: Criteria – New Service North Memorial Hospital

Criteria		Notes
Fiscal	◐	Partnerships with North Memorial and other employers may help lessen the cost of providing this new service.
Mobility	●	Provides new options in an otherwise auto-dependent area.
Community	●	Providing enhanced access promotes the integration of the facility as a critical community asset, benefitting those who require the services as well as the employees.
Deliverability	◐	The challenges will not be technical, but likely budget related (associated with new infrastructure required to extend services to this area).

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

St. Francis Medical Center

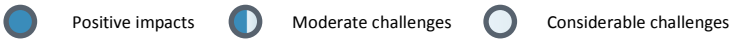
St. Francis Medical Center is a major facility located at Woodmen Road and North Powers Boulevard. Similar to Memorial North Hospital, this facility was developed with auto access as the

priority. St. Francis is located in a growing area of the community with the need for such medical facilities. However, access is currently limited for most modes, other than auto.

Transit ridership would likely draw from across the region. To provide this service, the Route 23 (Powers Boulevard) or Route 34 (Austin Bluffs Parkway) could be extended. Alternatively, a new route or extension could also be established. Route 23 is a relatively new route for Transit. The ridership on this route is still building and yet to be fully established. Implementation of this service would require a detailed review of potential models for provision of a connection to St. Francis Medical Center. It is possible that a deviated fixed route service or other on demand style of service may be appropriate in the early stages. Table 5.9 provides the application of criteria for this potential new service.

Table 5.9: Criteria – New Service St. Francis Medical Center

Criteria		Notes
Fiscal		Partnerships with St. Francis and other employers may help lessen the cost of providing this new service.
Mobility		Provides new options in an otherwise auto-dependent area.
Community		Providing enhanced access promotes the integration of the facility as a critical community asset, benefitting those who require the services as well as the employees.
Deliverability		The challenges will not be technical, but likely budget related (associated with new infrastructure required to extend services to this area).



Military Installations

The Colorado Springs area is home to multiple, critical military installations. These installations have a significant impact on the state and local economy, as well as travel patterns in the region.

A key opportunity for the growth of transit usage among military personnel and federal civilian staff is through the Mass Transportation Benefit Program. This program provides federal workers reimbursement for mass transit commuting costs “to reduce federal employees’ contribution to traffic congestion and air pollution, and to expand their commuting alternatives” (Executive Order 13150, April 2000). There has been recent political controversy over the size of the benefit (to match federal parking subsidies); however, the benefit is likely to continue in some form. The maximum benefit is dependent on the cap set through federal legislation and local transit costs. Education and marketing of this benefit, in tandem with new or enhanced transit options for the military installations could be considered. The sections below provide additional details on the various military installations and the plan’s transit recommendations.

Air Force Academy: The Air Force Academy is a major employment center and home to approximately 4,000 undergraduate students and 5,700 active duty military and civilian employees. Various discussions regarding transit services for employees and students have been reviewed over the years. Transit services for employees and students present two different needs and opportunities. Commuter service focused on Air Force Academy employees provides a good opportunity for Transit to capture new long-term riders. Additional analysis would be required to determine the best connections to and from the Air Force Academy, depending on where

employees reside. Depending on demand, vanpool or cadet bus services could be considered to address demand for commuters and the transportation needs for cadets residing at the Academy.

Peterson Air Force Base and Schriever Air Force Base: Both Peterson Air Force Base (AFB) and Schriever AFB are significant employment centers in the Colorado Springs area.

Peterson AFB currently employs more than 11,000 civilian and active duty staff and Schriever AFB employs approximately 8,000.

Route 24 provided service to Peterson AFB prior to April, 2015, and was eliminated due to low ridership. Peterson AFB is a significant employment center and reconnecting transit opportunities should be explored; however, these may include options outside of traditional fixed-route service (such as vanpool, etc.). Future services to Schriever AFB would also need to be considered through the process of providing services outside of the current service area. Similar to the Air Force Academy, the project team discussed various options for transit service to these large employment destinations. There are multiple challenges to successful transit connectivity for both bases.

The service to Peterson AFB previously delivered passengers to the west gate on Stuart Avenue. Between 2008 and 2012, the Orbiter shuttle provided shuttle service on Peterson AFB. However, due to low ridership and high cost, this service no longer operates. Those accessing Peterson AFB via Mountain Metro were presented with significant walking distances, depending on their ultimate destination on base. This may account for the poor performance of the now discontinued service. Better integration, frequencies, and delivery of passengers to their ultimate destinations must be addressed for any future transit service that may be considered for all military installations. Security restrictions prevent Mountain Metro from serving areas beyond the Peterson AFB gate. Ongoing coordination with the Department of Defense to identify an acceptable solution is encouraged for any future transit considerations. Options such as focused van pools or private coach service could be considered by the base in cooperation with Transit.

Schriever AFB is approximately an 18-mile drive from central Colorado Springs. Given the distance (outside the current service area) and isolation of the base, any new services would need to be focused on specific market segments. Fixed route bus service would likely not be an efficient or cost effective provision of transit to Schriever AFB. Options such as focused van pools or private coach service could be considered by the base in cooperation with Mountain Metro.

Fort Carson – Fort Carson is the largest military post in the Colorado Springs area. The post has approximately 28,000 active duty military and approximately 6,500 civilian employees.

Over 42,000 family members and a large number of military retirees also live on the post or otherwise require access to Fort Carson.

Fort Carson currently operates an internal shuttle service with three loop routes. The service is flexible, but works to provide 10-minute frequencies along the loops. Fort Carson is not directly served by Mountain Metro. The Route 11 stops approximately 0.5 miles north of Gate 4 (Magrath

Avenue) and approximately 0.6 miles from Gate 3 (Chiles Avenue). A transit center is located at PPCC, approximately one mile walking distance from Gate 4. However, there are no consistent sidewalk connections or shuttle services provided between the transit center (or other bus stops) and Fort Carson Gates 3 or 4. The 2014 schedule included service to the transit center by Routes 10, 11, 15, and 25.

Recommendations for Military Installations - Transit is addressed differently for various military installations around the country. One model that may be appropriate for all installations in the Colorado Springs area is based on Hampton Roads Transit bus services in Virginia. Hampton Roads Transit enters Naval Station Norfolk with multiple bus routes. These routes are all at the end of each bus line and require an appropriate military or military contractor's identification. Because the route is terminating and turning back to start a new service on the Naval Station, only military or authorized personnel would be on the bus before entering or leaving the installation. A security check is completed at the gate entrance. Fort Carson and Peterson AFB would likely benefit from this type of direct bus service that enters the installation and boards/alights passengers at a central/convenient location. Fort Carson's shuttle service would support local mobility, once transit users were on the post (without a vehicle). Peterson AFB would require some other measures to provide mobility once transit users were on base, such as shuttle, car share, cycle share, stronger walk links, etc.

Another model that should be considered in the longer term (as demand grows) has been implemented at Fort Meade in Maryland. This installation is a large civilian and military employer in the Baltimore/Washington D.C. area. Their approach to providing transit in the heavily congested metropolitan area is through a core, timetabled local bus service within the secured area of the post. This service links to multiple connections (at security gates) to shuttle services from area transit hubs (bus stops, light rail stations, etc.). Additionally, private commuter services are provided to Fort Meade employees with coaches from key hubs in suburban residential areas where concentrations of Fort Meade employees live. These commuter services enter the secured areas of Fort Meade (making multiple stops on the post) and are only available to employees with proper credentials. Security checks are completed prior to the private coaches entering Fort Meade. This approach could be applied to any of the military installations in the Colorado Springs area, but scaling the service based on demand (using vanpools or other smaller vehicles).

Additional options that could be considered to better support transit services to Fort Carson, Peterson AFB, and the Air Force Academy could include:

- Extending local bus service to provide stops on Fort Carson and Peterson AFB following the Hampton Roads Transit model. Extension of these services would require addressing additional mobility links across the post or base (continuous sidewalks, shuttle service, car share, cycle share, etc.) to provide efficient connections to final destinations.
- Vanpool or peak hour service from park and rides (Tejon, Woodmen, or others) to Fort Carson, Peterson AFB, and potentially the Air Force Academy (depending on demand). These services could be for authorized personnel only, simplifying the security procedures for entering the post, base, or the Air Force Academy.
- Shuttle connection between the PPCC transit center and Fort Carson. This service could be for authorized personnel only, simplifying the security procedures for entering the post.

- All installations could consider developing peak period entrance and exit gates where all lanes reversed to serve one direction as an entrance into (morning peak) or out of (evening peak) the installation. The lane that is typically used as an exit to the installation could be a peak period express lane for transit vehicles or carpools (with three plus passengers). Using the outbound lane as an express entrance allows uninterrupted (transit or carpool) access to the gate security, without constructing new lanes. Some of the security measures at the gates may not currently permit this type of reverse use; however, as the gates are updated overtime, they could be retrofitted to function in either direction on demand.
- Create better walking and cycle links could be created between adjacent bus stops or transit centers and the security gates at Fort Carson and Peterson AFB.
- A gate solely focused on pedestrians and cyclists could be considered to create a shorter walk link between PPCC transit center on the eastern side of Fort Carson.
- A timetabled, two-way service plan could be considered for the Fort Carson shuttle to create more efficient and predictable provision of service (as opposed to the current loop operations).

Table 5.10 provides the application of criteria for potential new services to the various military installations in the region.

Table 5.10: Criteria – New Service Military Installations

Criteria		Notes
Fiscal	●	Given that military installations are the largest employers in the region, there appears to be an untapped market to provide transit services that generate revenue or are cost neutral. The current (and long standing) challenge is to design services that meet the needs of military personnel and encourage mode shift.
Mobility	●	New services have the chance to provide significant mobility benefits for area residents and employees of the military installations. New services will need to be targeted to meet the unique needs and schedules of military personnel and civilian employees.
Community	●	Entry level military personnel and families require high quality and low cost mobility options.
Deliverability	○	The deliverability challenges of new transit services to the military installations are not technical, but likely coordination related. Working with the various branches of the DOD responsible for each installation will be essential to develop services that directly deliver riders to their ultimate destinations (without unnecessary transfers or long walk links).

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

Develop Expansion Standards and Policies

During the course of the plan's implementation, often challenging and complex service planning decisions will need to be made, while maintaining consistency with the plans objectives and major themes. To equip Transit with the tools to best support the objectives of this plan, it is recommended that the current service standards be expanded. Service standards are performance measures that help define the role of transit services.

The advantage of establishing standards is that they provide a fair, consistent process for determining what and when service changes should be made.

Service standards also can help define the community's expectations of the transit system and can ensure that the transit system continues to meet community objectives.

Transit's current service standards are largely focused on the practical elements of transit provision such as standards for stops and basic equipment. The proposed expanded service standards would include new performance measures to help determine and justify expanded services, new services, or new routes outside of the current service area. Particularly as Transit aims to focus within the existing service area, it is important to establish clear definitions for the existing service area and set well-defined expectations for expanding services beyond the existing service area. Measures may include defining the:

- Type of services that could be operated (fixed-route, deviated, flexible bus, etc.)
- Scale of ridership levels required to start or expand a service
- Requirements for financial support of services to be provided in specific areas at the request and benefit of an organization, facility, or corporation
- Level of partnerships required with area governments, other transit providers, transportation management associations, the military, businesses, etc.
- Minimum service provisions (frequencies), loads, span of service for expanded and new routes

New services would be required to meet the base measures in the new service standards to be considered for implementation. Table 5.11 provides the application of criteria for the creation of expansion standards and policies.

Table 5.11: Criteria – Develop Expansion Standards and Policies

Criteria		Notes
Fiscal	●	Expansion standards have the capability to focus funding to the areas of highest need and potential ridership success; expansion standards seek to limit support for unconstrained growth (and the higher cost associated with sprawling urban services).
Mobility	●	Expansion standards support focused and robust transit services. The standards help maintain frequent mobility options across the network.
Community	●	The potential for a focused and successful transit network provides wide ranging benefits for the community. The provision of urban services in a focused service area could allow higher quality and frequencies.
Deliverability	●	No complex technical challenges exist. Political controversy may be a concern, but information and education on the need for improved expansion standards can address this issue.

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

Consider High-Capacity Transit

As services and ridership improve and mature over time, there will be opportunities to consider higher-capacity transit services. The immediate plans are focused on:

- Supporting increased ridership and service levels back to and beyond pre-2009 conditions
- Expanding the system's market to capture more riders through its current bus services

Higher-capacity transit services should be considered when ridership grows to support cost-effective transit services at 15–minute frequencies or better on Core services. For instance, there

may be opportunities to operate limited-stop express services to improve travel times for longer-distance trips within the service area. Particularly along corridors with higher levels of congestion, bus priority measures could be implemented (e.g. queue jump lanes, dedicated transit lanes) to improve the speed and reliability of services operating on the corridor. Finally, as ridership capacity becomes limited with the operation of conventional 40'and 60', there are further opportunities to explore higher capacity technologies. The appropriate technologies are likely enhanced bus or BRT, but higher capacity technologies including streetcar and light rail should be considered for comparison.

These could include core corridors such as Academy Boulevard, Nevada and Cascade Avenues, Colorado Avenue, Platte Avenue, etc.

A focus should be provided on implementing the complete street's visions developed for Academy Boulevard based on the Academy Boulevard Corridor Great Streets Plan completed in 2011. Multiple corridors may require enhanced transit to create stronger mobility and connectivity. However, the focus should first be on continuing to develop the base level of service across the transit system (high frequencies and operating hours). As the transit service grows, enhanced (high capacity) transit could be further considered on:

- Academy Boulevard
- Nevada Avenue
- Cascade Avenues
- Colorado Avenue
- Platte Avenue

High capacity transit along these corridors could continue to focus the services along higher density, developed areas that are major origins and destinations for transit.

Table 5.12 provides the application of criteria for the consideration of high-capacity transit corridors.

Table 5.12: Criteria – Consider High Capacity Transit

Criteria		Notes
Fiscal	○	High capacity transit corridors can include high infrastructure and startup costs. However, these high quality transit services have the ability to attract and maintain significant ridership and revenue. Partnering for Federal and state support will be critical to create cost effective high capacity corridors.
Mobility	●	Well-designed facilities provide seamless connectivity across the system.
Community	●	Active and highly-utilized transit facilities could benefit local neighborhoods through increased foot traffic (eyes on the street) and additional mobility options for all.
Deliverability	○	Utilizing proven transit technologies can overcome any potential technical challenges. The greatest challenges will likely be cost, political, and public controversy. Education and clear business planning can help address these challenges.

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

Consider New Governance

The establishment and success of the Pikes Peak Rural Transportation Authority (PPRTA) has demonstrated the local desire and potential for regional cooperation, long term funding, and prioritization of transportation as a community asset. The Future of Regional Transit Study (2011) brought together a variety of community, business, financial, and government interests to identify recommendations that address transportation needs and opportunities throughout the Pikes Peak region.

This plan supports and complements the recommendations included in the Future of Regional Transit Study.

Measures should be advanced to assure long-term and stable funding for public transportation in the region. This includes the phased implementation of a new governance structure for transit. Regional planning, development, funding, and oversight of transit could provide a consistent mechanism for funding and equitable implementation of transit throughout the region. This regional perspective allows planning and the provision of transit to continue to be provided in a balanced manner, in partnership with all of the local governments. Table 5.13 provides the application of criteria for the consideration of new governance structures.

Table 5.13: Criteria – Consider New Governance

Criteria		Notes
Fiscal	●	New governance has the ability to create more stable and consistent streams of funding.
Mobility	●	Stability in funding results in stability in the provision of services (with less service cutbacks based on varying budgets).
Community	◐	A structure focused on mobility and the provision of reliable transit (with stable funding) has the ability to grow and maintain mobility options for the region.
Deliverability	○	Development of a new governance structure could have far reach benefits for regional provision of transit services. However, this would require considerable political will, regional cooperation, and education/information to help stakeholders understand the benefits and tradeoffs.

● Positive impacts ◐ Moderate challenges ○ Considerable challenges

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6 Funding Analysis & Implementation Strategies

Introduction

This chapter presents the current funding and revenues available for transit, as well as funding implications to maintain and improve the Mountain Metro system over the course of the plan (to 2040). The project team has researched information on the existing funding and revenue streams.

This chapter includes an expenditure plan (referred to as the fiscally-constrained plan) that identifies the priority projects that could be implemented within available funding estimates.

The overall funding estimates have been determined in consultation with Transit and PPACG. Projected funds do not cover the full range of transit and transportation needs identified for the PPACG area. A broader list and discussion of assumptions for transit projects (referred to as the un-constrained plan or vision plan) is included in Appendix A.

The content of this plan was created between April and December of 2014. Therefore, the substantive background, facts, statistics, and financial data are representative of the readily available information in 2014. Transit is continuously working to refine transit services in the PPACG area to improve frequencies, connectivity, routes, and overall mobility options for residents. Ongoing adjustments to the services and network routing (presented in this plan) are anticipated. Changes, such as spring 2015 service changes, begin progress towards achieving many of the recommendations presented in this plan.

Funding Sources

Current Funding Revenue Sources

Federal, state, regional, and local funding support the operations, maintenance, and expansion of transit services—including fixed-route bus services (Mountain Metro), specialized ADA services (Metro Mobility), transportation demand management programs (Metro Rides), and specialized transportation services provided by area non-profits. Table 6.1 summarizes the funding programs that support these services.

Table 6.1: Funding Programs

Program Name	Program Description
Federal Funding Programs	
Section 5307	Funding program for capital and operating expenditure needs. Distribution formula based on a combination of service parameters and population.
Section 5339	Funding program exclusively for capital projects to replace, rehabilitate, and purchase buses and bus-related equipment, and to construct bus-related facilities.
Section 5310	Discretionary funding program for capital and operating needs by private nonprofit groups in meeting the transportation needs of the elderly and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Funds are apportioned based on each state's share of population for these groups of people.
Congestion Mitigation and Air Quality Improvement (CMAQ)	Funding program to reduce congestion and improve air quality.
Surface Transportation Program (STP-Metro)	Flexible funding program for state and local governments to preserve or improve conditions or performance of transportation infrastructure and services, including pedestrian and bicycle infrastructure, and transit capital projects.
Transportation Alternatives Program (TAP)	Program that merged with three previous funding programs, including Transportation Enhancements (TE), Recreational Trails, Safe Routes to School, and several other discretionary programs. Eligible activities include planning, design and development of facilities for non-motorized forms of transportation and safe routes for non-drivers, conversion of abandoned rail corridors to trails, and the preservation or rehabilitation of historic transportation facilities.
State Funding Programs	
Funding Advancements for Surface Transportation and Economic Recovery Act (FASTER) – Local	State funding program to maintain transportation capital needs including local transit systems.
FASTER – Statewide Pool	Statewide competitive capital pool allocation eligible for transit capital funding. (e.g. for fiscal year 2015, CDOT approved funding for vanpool vehicle replacements).
Local and Regional Funding	
PPRTA Funds	Annual capital and operating funding for transit provided based on sales tax revenues generated within the Pikes Peak Rural Transportation Authority (PPRTA) tax district. 10% of the total PPRTA budget is allocated for fixed-route and specialized transit operations. 55% of the budget is allocated to a variety of transportation capital expenditures, including vehicle replacement, pedestrian and cycling improvements, road improvements. The remaining 35% of funds are used for maintenance.
City of Colorado Springs	Annual City general funds provided to fund Mountain Metro's operations and expansion. Vehicle farebox and advertising revenues to fund Mountain Metro's operations.

Funding Revenue Trends

Federal Transit Funding

Federal contributions have been a major source of funding for supporting transit services across the country, including Mountain Metro.

While federal funding for transit across the country has generally been increasing, the funds provided towards transit are only a fraction of the demand and need for transit and transportation agencies in the US.

Despite this steady increase in funding per capita, the future of federal transportation and transit funding is increasingly uncertain without a significant infusion of resources such as an increase to federal gas taxes and user fees, or reallocate general federal funds to cover the funding deficit.

Given these uncertainties, it is assumed that the federal transit apportionments that Mountain Metro receives will only grow modestly with the anticipated increases in population growth in the current service area, which equates to approximately one percent annually (excluding inflationary increases).

State Transit Funding

Dedicated funding for transit from the State of Colorado has generally been inconsistent. Previous transportation bills enacted in 2002 have called for an allocation of transit funding based on state sales tax proceeds beyond a specific threshold from auto sales; however the policy generated marginal funding for transit. In 2009, the State of Colorado enacted new policies that provide dedicated funding for strategic transportation projects through the Funding Advancements for Surface Transportation and Economic Recovery Act (FASTER). FASTER is funded through additional surcharges, fines and late fees on motor vehicle registrations. The policy stipulates that the additional surcharges will not increase over time. The PPACG area's stipend from FASTER is anticipated to remain constant.

Local Funding Sources

In 2014, nearly half of Transit's capital and operating funding originated from the City of Colorado Springs and from the PPRTA. These agencies will likely continue to play a key role in providing the needed funds to maintain and grow the system throughout the plan's horizon. An assessment of general fund revenues in Colorado Springs have identified that nearly 60 percent of revenues come from sales taxes and nearly ten percent from property taxes. PPRTA revenues come from sales taxes. Smoothing out of cyclical changes to the regional economy throughout the study horizon, it is assumed that sales tax revenues will increase at rates similar to the increase in population growth in the service area. Given that a major theme to the fixed route transit plan is to focus services within the existing service, a greater level of commercial land use intensification may occur within the existing service area. Therefore, sales growth may increase at a rate greater than population growth. Despite these possible sales growth increases, a one percent annual rate of funding increase was applied to provide a more conservative estimate of revenues.

Farebox Revenues

Farebox revenues are directly associated with changes in passenger ridership levels. An assessment of Transit's annual ridership and service hours was completed to better understand how ridership was influenced, based on changes to the network's service levels. Table 6.1 summarizes the relative change in annual service hours and passengers before the service reductions in 2007 and after the reductions in 2009 and 2010. The table shows that ridership

levels have not fallen at the same rate as the rate of service hour reductions—with 2010 figures showing a 39 percent decrease in service hours, while ridership decreased only 24 percent.

Table 6.2: Annual Service Hours and Passengers

	2007	2009	2010
Annual hours	194,000	151,000 (-22% from 2007)	118,000 (-39% from 2007)
Annual passengers	3,200,000	3,000,000 (-6% from 2007)	2,400,000 (-24% from 2007)

This smaller relative decrease in annual ridership is attributed partly to the types of services that were cut back or eliminated—many of which were newer services connecting newer communities and employment areas that do not or have not experienced higher levels of transit service. System ridership may not have fallen as much as the decrease in service hours because a larger majority of passengers may be using the service without alternative travel options. Nevertheless, because the service plan will focus on improving service reliability and providing expanded frequency and span within the existing service area, it is expected that ridership levels will generally increase over time at a rate similar to increases to service hours, at a rate of two percent annually.

Estimated Operating and Capital Funding Revenues

Based on existing funding sources and the established percentage increases from 2015 to 2040, Transit is expected to receive just more than $800 million (in constant 2014 dollars). Table 6.3shows the funding Transit is estimated to receive from 2015 to 2040 based on the assumptions identified in the previous sections. A further breakdown of estimated funding for the near term is shown in Table 6.4.

Table 6.3: Estimated Funding Revenues (constant 2014 dollars, thousands)

Funding Source	2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
Section 5307	7,152	36,845	38,725	40,700	42,776	44,958
Section 5339	789	4,066	4,273	4,491	4,720	4,961
Section 5310	416	2,143	2,252	2,367	2,488	2,615
Congestion Mitigation and Air Quality Improvement (CMAQ)	384	1,979	2,080	2,186	2,298	2,415
Surface Transportation Program (STP-Metro)	245	1,264	1,329	1,397	1,468	1,543
PPRTA funds	7,860	40,494	42,560	44,731	47,013	49,411
City of Colorado Springs	4,326	24,930	28,863	30,351	31,899	33,526
FASTER	769	3,960	4,162	4,374	4,597	4,832
FASTER State Pool	49	250	263	276	290	305
Farebox, Advertising	3,892	20,211	21,283	22,369	23,510	24,709
Transportation Alternatives Program (TAP)	245	1,265	1,329	1,397	1,468	1,543
PPRTA Reserve	6,200	0	0	0	0	0

Funding Source	2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
PPRTA II	887	4,571	4,804	5,049	5,306	5,577
TOTAL	33,214	141,978	151,922	159,688	167,834	176,395
					GRAND TOTAL	831,031

Table 6.4: Estimated Funding Revenues in the Near Term, 2015-2020 (constant 2014 dollars, thousands)

Funding Source	2015	2016	2017	2018	2019	2020
Section 5307	7,152	7,223	7,295	7,368	7,442	7,516
Section 5339	789	797	805	813	821	829
Section 5310	416	420	424	429	433	437
Congestion Mitigation and Air Quality Improvement (CMAQ)	384	388	392	396	400	404
Surface Transportation Program (STP-Metro)	245	248	250	253	255	258
PPRTA funds	7,860	7,939	8,018	8,098	8,179	8,261
City of Colorado Springs	4,326	4,546	4,766	4,986	5,206	5,426
FASTER	769	776	784	792	800	808
FASTER state pool	49	49	49	50	50	51
Farebox, advertising	3,892	3,931	4,010	4,050	4,090	4,131
Transportation Alternatives Program (TAP)	245	248	250	253	255	258
PPRTA reserve*	6,200	0	0	0	0	0
PPRTA II	887	896	905	914	923	932
TOTAL	33,214	27,461	27,949	28,401	28,855	29,312

* assumes the additional funds allocated from the PPRTA is a discretionary expenditure and will not recur in subsequent years.

Estimated Operating and Capital Expenditures

A prioritized project list was compiled to understand the capital and operating expenditures to maintain and expand fixed route and specialized transit services to meet the growing needs in the community. Projects identified in the list were refined from the 2035 Regional Transportation Update based on the fixed route and specialized recommendations identified in this plan as well as feedback from PPACG and Transit.

The projects were prioritized first by ensuring that existing services are maintained throughout the plan's horizon (2040). Prioritization beyond maintaining existing services were generally assessed based on its ability to meet the plan's objectives, including providing transportation choice, improving access to local destinations, improving the cost-effectiveness of services, relieving congestion, promoting environmental stewardship, promoting economic vitality, and ensuring coordination between various transit services.

Given the limited funding revenues estimated through the plan's horizon, the amount of capital and operating investments identified in the prioritized project list will not all be funded.

To address the limitations in funding beyond the planning horizon, a fiscally constrained financial plan was developed to keep expenditures within the estimated budget. This fiscally constrained financial plan identifies the prioritized projects that could be afforded based on the estimated funding outlays between 2015 and 2040. An assumed implementation timeframe is identified for each project. This approach works to ensure budget deficits are not incurred in any given year.

In total, the fiscally constrained project list will cost $806,895,000 between 2015 and 2040, which is within the estimated revenues budget of $808,563,000. Table 6.5 outlines the prioritized project list - fiscally constrained plan.

Table 6.5: Prioritized Project List Identified within Constrained Plan, Timeframe, and Cost (constant 2014 dollars, thousands)

	Proposed Improvements	Assumed Implementation Timeframe	Total Expenditures (2015-2040)
1	Maintain existing operations • Fixed-route operations • ADA paratransit operations • Vanpool, schoolpool, carpool operations • Specialized transportation for elderly and disabled • Administration and planning • General capital funding • Vehicle replacement	Ongoing	581,072
2	BNSF railroad corridor acquisition purchase ROW – for multimodal corridor, non-motorized transportation, or BRT	2015-2020	1,063
3	Transit route 12 pedestrian and transit accessibility – construct missing sidewalks, ADA curb ramps, and transit stops to improve safety and access	2015-2020	355
4	Transit route 9 pedestrian and transit accessibility and cycle lanes – Construct missing sidewalks, ADA curb ramps, and transit stops to improve safety and access. Complete missing cycle lane segment	2015-2020	802
5	Transit sidewalks and bus stops	2015-2020	2,800
6	Transit JARC/New Freedom projects	2015-2020	14,900
7	Downtown transit station relocation	2015-2020	8,340

8	Fixed-route service improvements stage 1
	• Fixed-route
	  • Buses (procurement and replacement)
	  • Service
	• ADA paratransit – increases as a result of span and service coverage expansion
	  • Buses (procurement and replacement)
	  • Service
		2015-2020	56,588

9	Garage and maintenance facility expansion - house more vehicles to beyond 2040	2015-2025	20,000

	Proposed Improvements	Assumed Implementation Timeframe	Total Expenditures (2015-2040)
10	ADA paratransit service improvements stage 1 • Buses (procurement and replacement) • Service	2021-2025	10,315
11	Transit variable message sign expansion, smartcard, IT, ITS, real time bus, etc.	2021-2025	10,000
12	Academy Blvd. corridor improvements (ABC Great Streets Study) – develop as a primary transit corridor	2021-2025	32,000

13	Fixed-route service improvements stage 2
	• Fixed-route
	  • Buses (procurement and replacement)
	  • Service
	• ADA paratransit – Increases as a result of span and service coverage expansion
	  • Buses (procurement and replacement)
	  • Service
		2026-2030	30,529

14	ADA paratransit service improvements stage 2	2026-2030	7,015
15	Park-n-Ride access for cycles and pedestrians - improvements to park and ride lots	2026-2030	76
16	Transit bus transfer station reconstruction, Citadel Mall area	2026-2035	10,000
17	Transit bus stop amenity increase	2031-2035	100
18	Transit route 1 and 7 stage 2 enhancements	2031-2035	340
19	Transit route 6 stage 2 enhancements	2031-2035	275
20	Transit route 6 stage 3 enhancements	2031-2035	2,350
21	Transit route 6 stage 4 enhancements	2031-2035	3,790
22	Transit route 8 stage 2 enhancements	2031-2035	1,320
23	Transit route 9 stage 3 enhancements	2031-2035	1,185
24	Transit route 9 stage 4 enhancements	2031-2035	535
25	Transit route 12 stage 4 enhancements	2031-2035	320
26	Transit route 16 stage 2 enhancements	2031-2035	1,385
27	ADA paratransit service improvements stage 3 • Buses (procurement and replacement) • Service.	2031-2035	3,665

28	Fixed-route service improvements stage 3
	• Fixed-route
	  • Buses (procurement and replacement)
	  • Service
	• ADA paratransit - increases as a result of span and service coverage expansion
	  • Buses (procurement and replacement)
	  • Service
		2031-2035	15,241

29	Fixed-route service improvements stage 4
	(only up to 80% of proposed changes)
	• Fixed-route
	  • Buses (procurement and replacement).
	  • Service
	• ADA paratransit – increases as a result of span and service coverage expansion
	  • Buses (procurement and replacement)
	  • Service
		2036-2040	11,621

Proposed Improvements	Assumed Implementation Timeframe	Total Expenditures (2015-2040)
	TOTAL EXPENDITURES	827,982
	TOTAL ESTIMATED REVENUES	831,031

Table 6.6 shows the expenditures required for the Transit system from 2015 to 2040—a further breakdown of capital and operating expenditures for the near term is shown in Table 6.7. Estimated expenditures are divided into the five major improvement types:

- Maintaining existing operations – Continued operations and maintenance of existing fixed-route and ADA paratransit services, transportation demand management (TDM) programs (e.g. vanpool, schoolpool, and carpool), specialized transportation for elderly and disabled, general planning and administration, overall capital funding unallocated to specific projects, and replacing existing vehicles and infrastructure when it reaches its useful life
- Service improvement and expansion – Improvements to promote on-time performance, improve service frequencies on select routes, expand service span
- Station, stop and streetscape Improvements – Improvements to sidewalk and road improvements to enhance pedestrian access to transit stops
- Technology – Transit variable message sign expansion, smart card technology, information technology systems, real time information systems
- Miscellaneous – Projects including additional BNSF railroad corridor acquisition purchase for multimodal corridor, and Transit JARC/New Freedom projects

Table 6.6: Estimated Expenditures in Fiscally Constrained Plan in Five-Year Increments (constant 2014 dollars, thousands)

Proposed Improvement Type	2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
Maintaining existing operations						
Fixed route operations	10,294	51,469	51,469	51,469	51,469	51,469
ADA paratransit operations	4,254	21,268	21,268	21,268	21,268	21,268
Vanpool, schoolpool, carpool operations	689	3,446	3,446	3,446	3,446	3,446
Specialized transportation for elderly and disabled	1,048	5,242	5,242	5,242	5,242	5,242
Administration and planning	2,163	10,816	10,816	10,816	10,816	10,816
General capital funding	2,000	10,000	10,000	10,000	10,000	10,000
Vehicle replacement	150	8,320	14,525	3,875	10,570	11,980
Service improvement and expansion						
Fixed route						
Fleet (new and replacement)	0	2,700	3,150	1,350	7,750	5,050
Operations	0	2,565	10,260	11,874	31,873	38,358
ADA paratransit						
Fleet (new and replacement)	0	0	100	300	900	650
Operations	0	0	473	3,673	10,287	15,161
Station, stop, and streetscape Improvements	3,957	8,340	1,682	36,376	4,118	0

Proposed Improvement Type	2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
Technology	0	0	10,000	0	0	0
Miscellaneous	8,659	17,812	9,492	0	0	0
TOTAL	33,214	141,978	151,922	159,688	167,739	173,440
					GRAND TOTAL	**827,982**

Table 6.7: Estimated Expenditures in Fiscally Constrained Plan in the Near Term, 2015-2020 (constant 2014 dollars, thousands)

Proposed Improvement Type	2015	2016	2017	2018	2019	2020
Maintaining existing operations						
Fixed route operations	10,294	10,294	10,294	10,294	10,294	10,294
ADA paratransit operations	4,254	4,254	4,254	4,254	4,254	4,254
Vanpool, schoolpool, carpool operations	689	689	689	689	689	689
Specialized transportation for elderly and disabled	1,048	1,048	1,048	1,048	1,048	1,048
Administration and planning	2,163	2,163	2,163	2,163	2,163	2,163
General capital funding	2,000	2,000	2,000	2,000	2,000	2,000
Vehicle replacement	150	2,520	900	1,025	725	3,150
Service improvement and expansion						
Fixed route						
Fleet (new and replacement)	0	0	0	900	900	900
Operations	0	0	0	428	855	1,283
ADA paratransit						
Fleet (new and replacement)	0	0	0	0	0	0
Operations	0	0	0	0	0	0
Station, stop, and streetscape Improvements	3,957	0	3,790	4,550	0	0
Technology	0	0	0	0	0	0
Miscellaneous	8,659	4,493	2,812	1,050	5,927	3,531
TOTAL	33,214	27,461	27,949	28,401	28,855	29,312

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Originator
Chris Proud

Other Contributors
Dennis Fletcher, Matt Lee, Hannah Polow, Laura Sneeringer, Beth Vogelsang

Reviewed by
Dennis Fletcher

Distribution

Client	Steer Davies Gleave

DNV UKAS QUALITY MANAGEMENT 013

Our offices

Bogotá, Colombia
+57 1 322 1470
colombiainfo@sdgworld.net

Bologna, Italy
+39 051 656 9381
italyinfo@sdgworld.net

Boston, USA
+1 (617) 391 2300
usainfo@sdgworld.net

Denver, USA
+1 (303) 416 7226
usainfo@sdgworld.net

Leeds, England
+44 113 389 6400
leedsinfo@sdgworld.net

London, England
+44 20 7910 5000
sdginfo@sdgworld.net

Madrid, Spain
+34 91 541 8696
spaininfo@sdgworld.net

Mexico City, Mexico
+52 (55) 5615 0041
mexicoinfo@sdgworld.net

New York, USA
+1 (617) 391 2300
usainfo@sdgworld.net

Rome, Italy
+39 06 4201 6169
italyinfo@sdgworld.net

San Juan, Puerto Rico
+1 (787) 721 2002
puertoricoinfo@sdgworld.net

Santiago, Chile
+56 2 2757 2600
chileinfo@sdgworld.net

São Paulo, Brazil
+55 (11) 3151 3630
brasilinfo@sdgworld.net

Toronto, Canada
+1 (647) 260 4860
canadainfo@sdgworld.net

Vancouver, Canada
+1 (604) 629 2610
canadainfo@sdgworld.net